

LIMS Request for Proposal



SAN BERNARDINO COUNTY SHERIFF'S DEPARTMENT SCIENTIFIC INVESTIGATIONS DIVISION

Laboratory Operations

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Request for Proposal (RFP) for San Bernardino County Sheriff's Department (SBCSD) Scientific Investigations Division (SID)

SUBJECT: REQUEST FOR PROPOSALS TO PROVIDE A LABORATORY INFORMATION
MANAGEMENT SYSTEM (LIMS) FOR SBCSD SID

OVERVIEW

The San Bernardino County Sheriff's Department (SBCSD) is requesting proposals from qualified vendors to provide a LIMS for the SBCSD Scientific Investigations Division (SID), 200 S. Lena Road, San Bernardino, CA 92415-0056. Laboratory Automation Solutions (LAS) Inc. has been selected as an independent consultant and Project Management Support for the System's laboratory automation effort. SBCSD-SID will select a vendor whom will be invited for negotiations to provide the required software and services.

Project Description

The SBCSD-SID intends to purchase a web-based LIMS as part of an ongoing program to improve the quality and efficiency of their operations and to embrace the doctrine of Good Automated Laboratory Practices (GALP) and American Society of Crime Laboratory Directors / Laboratory Accreditation Board (ASCLD/LAB). The new LIMS will provide the functions necessary to identify, communicate, plan, schedule and execute the tasks necessary to manage forensic examination workload and reporting. This document includes information about SBCSD-SID facilities and details specific requirements for responding to the technical portion of the RFP to provide a turnkey LIMS software and support services solution. Proposals shall address not only the immediate needs of SBCSD-SID, but also the long-term goals of the laboratory enterprise and supporting/supported organizations.

Selection Process and Criteria

From the proposals received, SBCSD-SID will select the most qualified firms for a scripted product demonstration (Appendix III). Vendors should be prepared to perform the scripted demonstration of their products two weeks following the proposal submission deadline. Demonstrations will be scheduled for November 2007.

1. Project Description

1.1 *Background / Organization*

The SBCSD-SID LIMS project was triggered by a strategic/tactical plan to modernize the information systems throughout the SBCSD enterprise.

1.2 *Procurement Strategy*

SBCSD is seeking a user-friendly, web-based LIMS that can be easily managed with available laboratory staff (one SBCSD employee) on a part-time basis. The services and expertise needed for this project include installation, configuration, customization, training, analytical instrument interfacing, and integration with other software components, data conversion support, deployment consulting and assistance. Ongoing maintenance and support, including product upgrade assistance is required, possibly with the commitment of a long-term service agreement.

This RFP is provided specifically to help define LIMS software and related services and hardware to support the laboratory enterprise. The proposal shall identify hardware and infrastructure requirements to support the laboratory enterprise. SBCSD-SID will provide all necessary infrastructure components required by the proposed LIMS. The proposal shall identify any specific hardware (other than client PCs) required to support the LIMS being proposed.

1.3 *Written Proposal Preparation Instructions*

The proposer shall submit six hardcopies printed on recycled paper (see Appendix VIII, Section I.A.16) and 1 electronic copy (*Microsoft Word and Excel* are acceptable) of their proposal which shall include and be structured as described below.

1. The Proposed Technical Solution

- a. An Executive Summary
- b. An evaluation of information supplied in the attached Selection Matrix – Appendix IV
- c. The vendor's understanding of the project as demonstrated by their proposed project approach, broken down by tasks and subtasks
- d. A schedule estimating the time necessary to complete the proposed scope of services
- e. Description of the implementation team, including names, classifications and qualifications of key personnel and sub contractors and an organization chart showing how the team will work together.

- f. A table showing the estimated staff hours for all SBCSD-SID and Vendor personnel assigned per task based on the vendor's understanding the project scope of work

2. Similar Experience and Past Performance

The proposal shall include references from at least five relevant contracts within the past three years. References shall be from previous or current projects that are similar to the work under this requirement, preferably in ASCLD/LAB-accredited forensic laboratories. SBCSD-SID reserves the right to contact previous customers not listed as references.

3. Management and Staff

The proposal shall describe the proposed Project Management approach and explain how the approach will ensure timely accomplishment of SBCSD-SID requirements. The proposal shall include resumes and intended roles for personnel proposed for the project with sufficient detail to enable the evaluation team to determine their qualifications for the proposed work.

SBCSD-SID prefers a vendor implementation staff with functional experiences in laboratory operations similar to SBCSD-SID and implementation experiences related to the same LIMS product as the LIMS being proposed. The proposer shall indicate each proposed individual's percentage of time available to work on SBCSD-SID project from the time of contract award until the installed LIMS has been fully implemented.

The proposal shall identify an individual who shall serve as the primary point of contact for the contract. (See Appendix VIII, Section I.A.2)

4. Background Checks

The San Bernardino County requires that all contractor personnel who work in a County facility submit and pass a Background Check. The proposal shall include a statement agreeing to submit within one week the required biographical and fingerprint information for each person who shall be engaged in performing any part of the installation. The biographical and fingerprint information shall be sufficient to allow COUNTY to perform security background checks on all such persons. The information must include full name, date of birth, social security number, and driver's license number for every person who shall be engaged in performing any part of the installation. CONTRACTOR agrees to prohibit any person identified by COUNTY as a security risk as a result of negative background checks from COUNTY facilities. COUNTY has the right to request removal of any CONTRACTOR employee if it is in the best interest of the COUNTY.

5. Company Resources

The proposer shall provide information about their business organization and their company's ability to provide the complete LIMS solution. The proposer shall provide

information concerning the size of their company, including a numerical breakdown of staff in the areas of development, implementation and technical support for the LIMS proposed for SBCSD-SID. Technical support means those resources available to assist SBCSD-SID should technical problems arise and include Help-Desk support and staff dedicated to developing product enhancements and upgrades. Additionally, the proposer shall provide information concerning general annual revenues and other related financial data.

6. Cost/Pricing Information

In a separate, sealed envelope, submit a fee/pricing proposal to perform the described work. This cost/pricing information will be used as a basis for negotiation with the successful Vendor (Appendix VII).

7. Statement Certifying Insurance Coverage

A completed "Statement Certifying Insurance Coverage" certifying that the required insurance coverage can be obtained by the Vendor and that the Vendor understands said coverage is a prerequisite for entering into a contract with San Bernardino County for the LIMS Procurement.

1.3.1 Vendor Evaluation Criteria

The successful proposer will be selected objectively using the following criteria:

- **The Proposed Technical Solution (100 Points)**
- **Corporate Experience and Product Maturity (100 POINTS)**
- **Key Personnel Qualifications, Experience, Availability (100 POINTS)**
- **Project Plans and Implementation Approach (50 POINTS)**
- **Training and Test Plans (50 POINTS)**
- **Cost/Pricing Information (100 POINTS)**
- **Statement Certifying Insurance Coverage (0 Points but mandatory)**
- **A Scripted Demonstration of the Proposer's Product (100 POINTS)**

The top three Vendors (based on the evaluation criteria above) will be invited to perform a scripted demonstration (Appendix III - LIMS Vendor Demo Script) of their product approximately two weeks after the receipt of the proposals. The short-listed vendors will then be objectively evaluated and their scores will be added to their total.

SBCSD-SID will enter into negotiations with the firm receiving the highest rating following the proposal review and scripted demonstration. If such negotiations are not successful, SBCSD-SID will then enter into negotiations with the firm or firms receiving the next highest rating.

As part of the consideration for entering into agreements with the successful firms, the firms are required to sign an agreement including the indemnification and hold harmless language and to obtain insurance with an insurer or insurers satisfactory to SBCSD-SID as set forth in Appendix VII – Insurance Coverage and Appendix VIII, Section I.B.

SBCSD-SID will make an award to the Proposer whose responsible proposal represents the best value to SBCSD-SID, price and other factors considered, in accordance with the Evaluation Criteria above.

To be responsive, the Proposer must address all the requirements of the solicitation and must include all information specifically required in all sections of the solicitation. The Proposer must state how it will meet the requirements; repeating words or paraphrasing is typically not acceptable.

1.4 Proposal Delivery

Proposals must be received **prior to 4:00 p.m. on Wednesday, October 31st, 2007** at the address shown below:

**SBCSD SID LIMS Procurement RFP SHR 07-01
Purchasing Department
Attention Bill Brock
General Services Facility
777 East Rialto Avenue
San Bernardino, CA 92415-0760**

1.5 Disputes Relating to Proposal Process and Award

In the event a dispute arises concerning the proposal process prior to the award of the contract, the party wishing resolution of the dispute shall submit a request in writing to Captain Dennis J. Casey. Vendor may appeal the recommended award or denial of award, provided the following stipulations are met:

- I.** Appeal must be in writing.
- II.** Must be submitted within ten (10) calendar days of the date of the recommended award or denial of award letters.
- III.** An appeal of a **denial of award** can only be brought on the following grounds:
 - a) Failure of the County to follow the selection procedures and adhere to requirements specified in the RFP or any addenda or amendments.
 - b) There has been a violation of conflict of interest as provided by California Government Code Section 87100 et seq.
 - c) A violation of State or Federal law.

- d) Appeals will not be accepted for any other reasons than those stated above. All appeals must be sent to:

San Bernardino County Sheriff's Department
Bureau of Administration
Attn: Captain Dennis J. Casey
655 East Third Street, Second Floor
San Bernardino, CA 92415-0061

2. SBCSD-SID Laboratory Operations Overview

The SBCSD-SID and California Identification Division (CAL-ID) Laboratory Operations provide forensic laboratory services to the SBCSD, District Attorney's Offices, numerous Agency Investigation Units, County, Criminal and Family Courts, State and Federal Courts. Administratively, the SBCSD-SID and CAL-ID divisions report to the San Bernardino County Sheriff. As shown in the following diagrams SBCSD-SID is organized into 2 divisions and 14 operating/support units.

- SID
 - Property & Evidence Unit
 - Alcohol Unit
 - Narcotics Unit
 - Forensic Biology Unit
 - Firearms/Toolmarks Unit
 - Trace Evidence Unit
 - Crime Scene Investigations Unit
 - Clerical Unit
 - Administration Unit
 - Quality Assurance Unit
- CAL-ID
 - Latents Comparison Unit
 - Tenprints Unit
 - Administration Support
 - Systems Support

An SBCSD Captain is responsible for the administrative operations of the San Bernardino County Sheriff's SID & CAL-ID centers. SBCSD Lieutenants answer to the Captain and are responsible for assisting in the administration and management operations. Each Lieutenant is responsible for maintaining and approving expenditures for multiple cost centers and grants. The SID Laboratory Director is responsible for laboratory analytical operations.

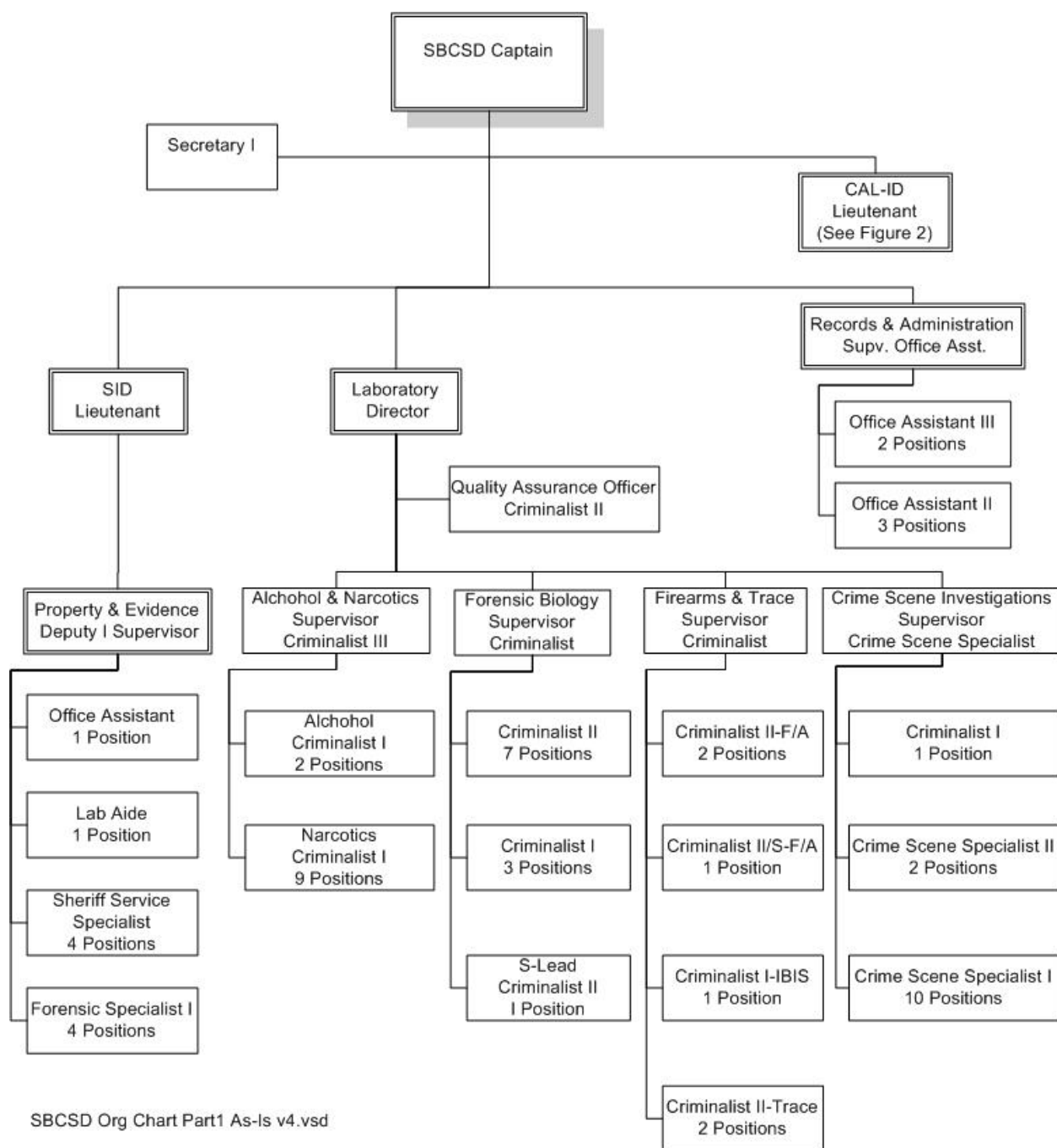


Figure 1 SBCSD-SID Organization Part 1

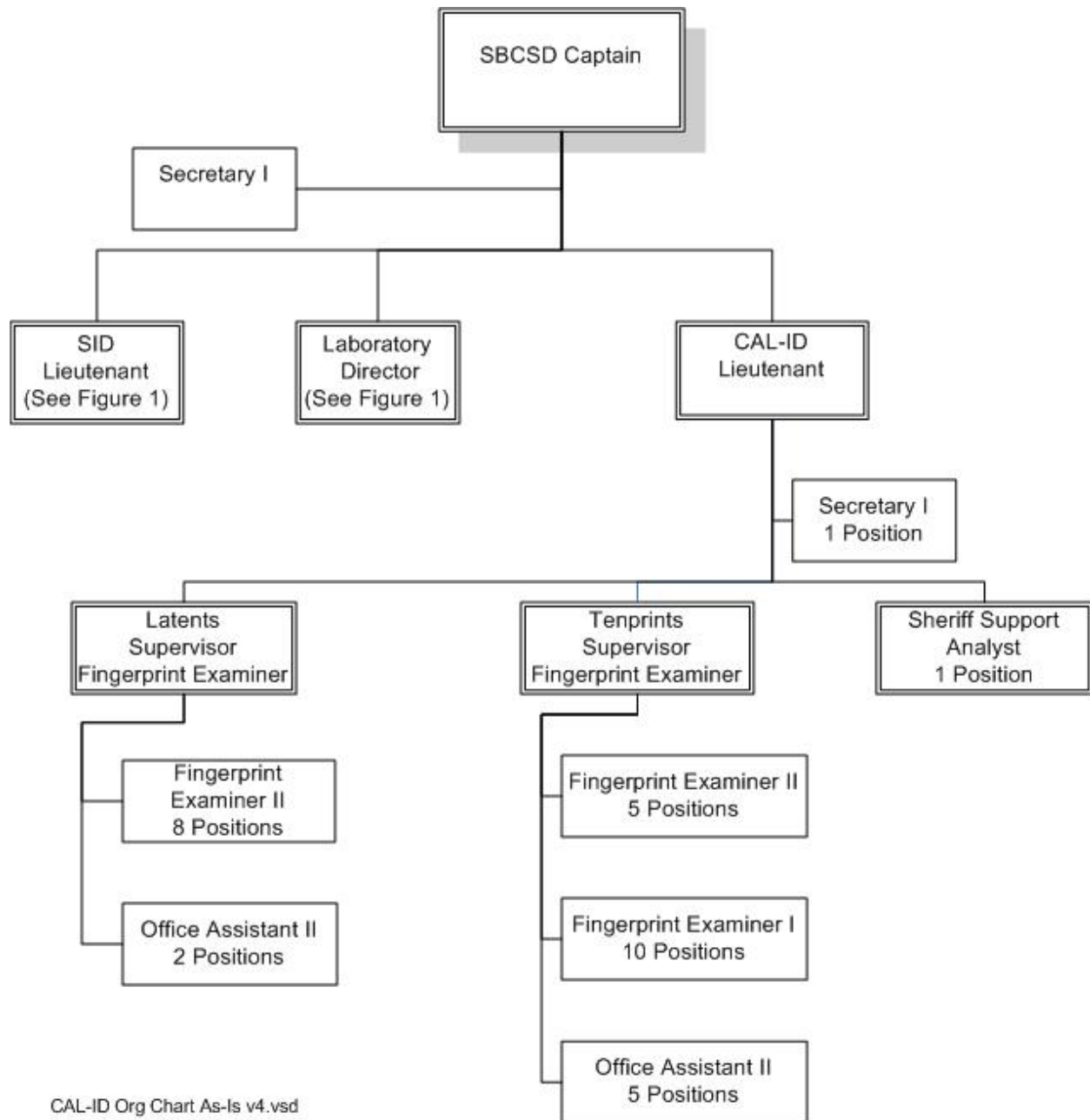


Figure 2 SBCSD-SID Laboratory Organization Part 2

The following sections of the document describe existing practices of SBCSD-SID operations, including workflow diagrams of key processes, interactions with systems and other organizations, decision points, inputs and outputs. It is intended as a descriptive summation of the processes in place to enable the reader to gain a clear understanding of SBCSD-SID operations. It is also intended to help clarify why certain LIMS functions are required by capturing the elements of processes that are beneficial with the anticipation of incorporating those elements into the LIMS. The LIMS shall support all SBCSD-SID functions described in this section.

2.1 Existing Applications and IT Architecture

SBCSD currently uses a variety of IBM Mainframe and Windows based database applications, and Excel spreadsheets, to manage specific types of property, evidence, operational support and statistics. The following are significant in size and use:

- PETS – Property & Evidence Tracking
- Case Tracking System

In addition to the systems described above, some of the Units develop and maintain standalone databases, such as Access-based databases, to meet their own data management needs or have Access-based applications running on MS SQL provided by Technical Services Division.

The following diagram shows the interfaces between the two laboratory information systems and the SBCSD-SID users and between the laboratory and MISD managed systems.

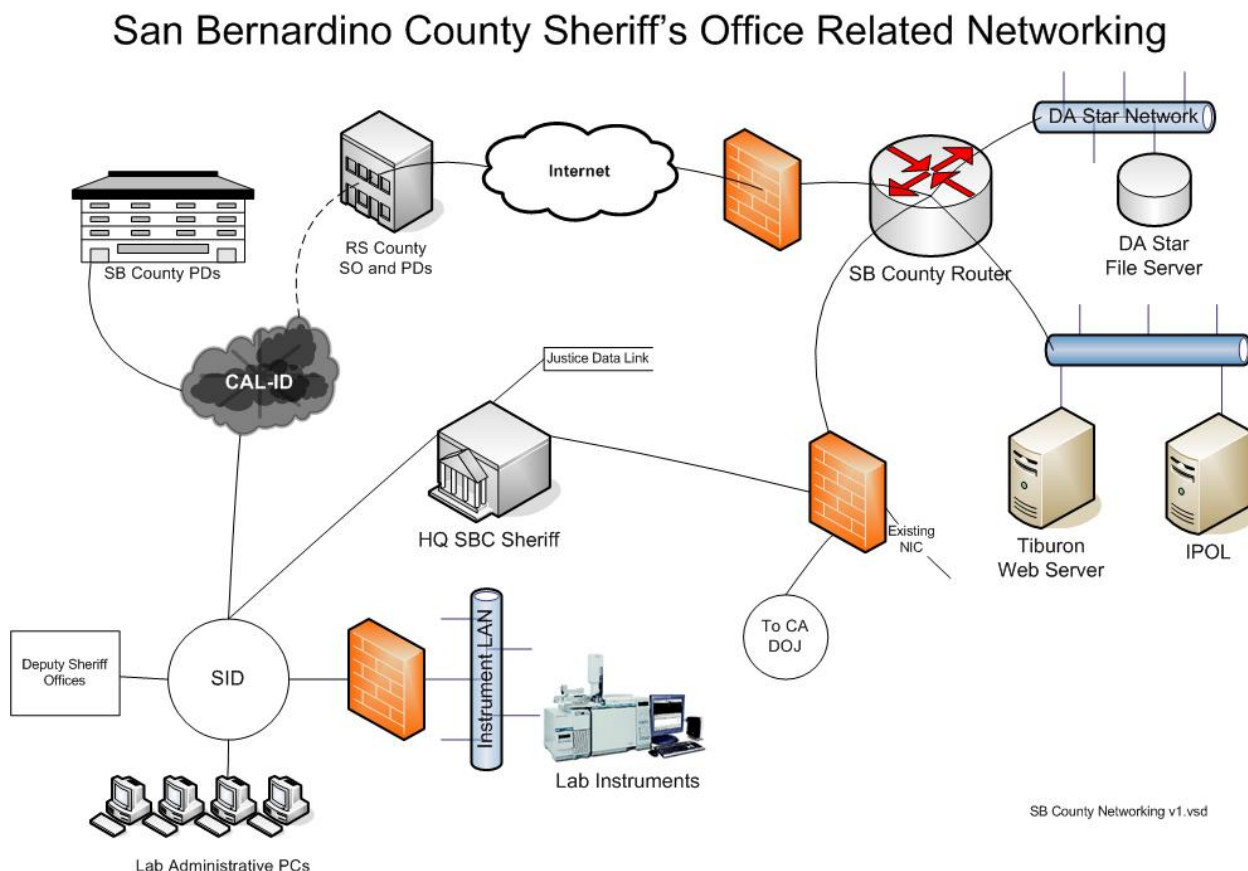


Figure 3 SBCSD LIMS and Networks

Technical Services Division (TSD) supports SID by providing technical and information services. No attempt is made here to describe TSD operation, only a description of the supported services and applicable platforms are given:

- The Blood Alcohol (BA) application is an ASP.NET web based system with MS SQL Server.
- Case Tracking or SIDNET is an ASP.NET web based system with MS SQL Server.
- PETS is a DB2 application hosted on the county's Main Frame system and utilizes a terminal identifier to record which agency is entering data.
- The county maintains a wide area intranet.
- Central Name Index (CNI) is a main frame application.

Other MS Access applications on MS SQL Server maintained by TSD manage court testimony scheduling, QA Proficiency Testing, Expert Witness reviews, and employee data information. SID PETS and intranet workstations range from MS DOS machines in use for label printing to MS Win XP workstations.

The SID Sections use a variety of custom-designed worksheets to meet their individual needs. Some worksheets are stand-alone MS Word templates or Excel spreadsheet forms used for entering data while others are printed paper multi-copy forms.

2.2 Agency Interactions and Evidence Collection

This part of the document describes the interaction of SBCSD-SID with other agencies and the investigations performed by SBCSD supporting them that result in the collection of case evidence and property. Although each analytical section of the laboratory functions differently, the SBCSD operates a centralized evidence receiving function that receives evidence at primary locations in the laboratory. Found and unclaimed property and crime case evidence is received in a counter services and drop box facility adjacent to warehousing facilities, while all other evidence is delivered within CSI, Narcotics, or the CAL-ID units.

2.2.1 District Attorney and Laboratory Interactions

Occasionally the County's District Attorney's (DA) Office submits evidence directly to the SID for analysis; such submission is usually accomplished by investigating agencies, departments or divisions. It may be necessary for the DA to store materials recorded as evidence by the court during a trial's proceedings but such storage is not provided for illicit drugs, guns, or evidence containing blood or body fluids. On occasion, the DA may view evidence retained at SID during preparation, or in the course, of a proceeding. The DA must file charges on a known suspect within 48 hours of the suspect's arrest. The DA has 10 court days to bring a suspect to a preliminary hearing for court date setting and bail consideration. It is not uncommon for a suspect to enter a guilty plea and negate the need for further evidence testing and analysis, which may not be efficiently communicated to the laboratory. The DA may request tests, retests and test priorities. Priority assignments may be revised as more information is collected. Approximately 220 attorneys work for the DA. The DA works closely with investigating agencies and the laboratory. Reports are submitted by the laboratory to the various DA offices in a

variety of manual (predominant) and automated formats. The DA maintains 15 branches and approximately 4 Chief Clerks that supervise administrative support. Each branch has a Head, Lead, and Senior Clerk (not a specific job title) supervising clerical staff. The DA's primary automated system for case tracking is a county wide STAR system. Figure 4 depicts the typical evidence to court workflow in San Bernardino County (SBC).

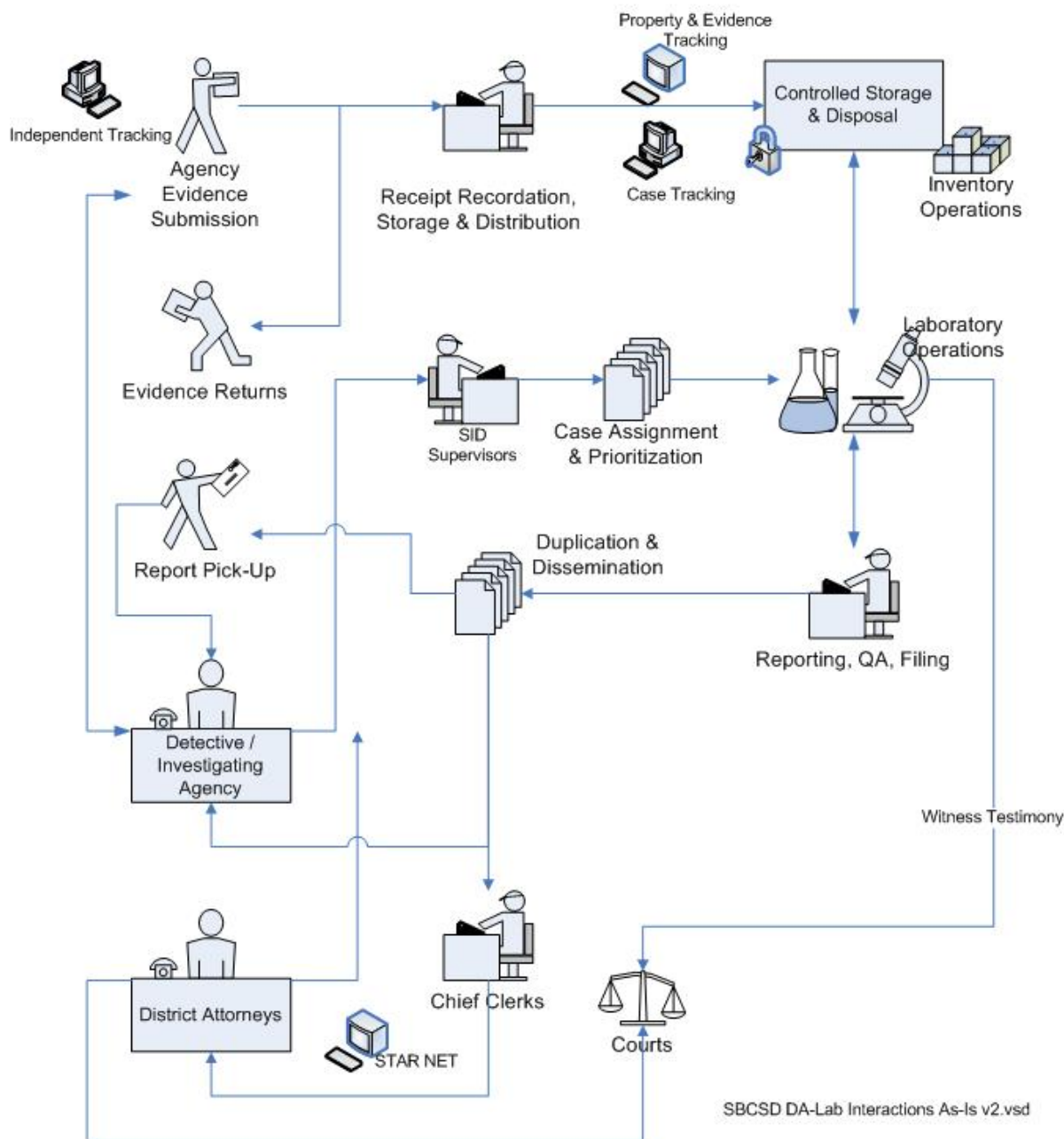


Figure 4 District Attorney and Laboratory Interactions

2.2.2 Evidence Submitting Agencies and Laboratory Interactions

Many of the county's Police Departments maintain their own property rooms and may have their own automated evidence/property tracking systems. Agencies submit evidence for testing

by SID with General Request Forms (GRF) commonly called "Pink Sheets" or their equivalents. A deputy, detective, evidence technician, law enforcement personnel, or a courier physically delivers items to SID. County agencies that have Property and Evidence Tracking System (PETS) access are required to enter evidence into the system following collection and before submittal; Non-SBCSD entities may have their own bar-coding systems for in-house use. Agencies that utilize PETS obtain and maintain a roll of pre-printed barcode labels from SID and prepare packages for submission as do the internal units of SID that generate evidence through sub-sampling or original receipt as does the Crime Scene Investigations (CSI) and Clandestine Investigations units. Agencies that do not have PETS access consider the task, were PETS to be provided, as a duplicate entry effort since they may track their evidence submissions in their own systems. For an LRN (Laboratory Number – Narcotics) a copy of the request is a sufficient receipt. Latent prints developed by agencies are often delivered directly to the Latent Print (LP) Unit, bypassing Property & Evidence (P&E). Hardcopy reports are collected at P&E where interagency mail bins are utilized. Evidence is returned by P&E to agencies as described in the P&E narratives, guns being typically destroyed following return. Agencies may have their own Computer Assisted Dispatch/Records Management Systems (CAD/RMS), some being interfaced with SBCSD or each other. All agencies are required to be interfaced with SBCSD by December 2006. All agencies have internet access; many have access to the mainframe CNI system and some have access to the DA's STAR system. Some agencies take digital photographs while others may develop their own 35mm film in-house and others utilize commercial photography developers. Some agencies are implementing their own DIMS while some intend to remain on 35mm film.

2.2.3 Crime Scene Investigation (CSI) Unit

Customers of SID CSI include the numerous PDs of the county, Highway Patrol, other CSI or Clandestine Laboratory Response Personnel, School, and Train/Transportation system agencies. The supervisor on call dispatches by phone from the Sheriff's Department, but has the option to decline requests from any agency. CSI focuses on homicides, officer-involved shootings, and other major crimes.

Agency Deputies take witness statements and may collect evidence in concert with the CSI Investigator. CSI is tasked with instructing agencies on the methods of evidence collection. The division collects evidence, but bodies are the responsibility of Coroner's Office and CSI can obtain physical evidence from the morgue if necessary.

2.2.3.1 General CSI Evidence Collection

The Investigator collects all types of evidence at crime scenes. They evaluate bullet trajectories, sketch, placard evidence and photograph crime scenes. CSI may collect evidence from victims, suspects, and witnesses at locations other than the crime scene such as in hospitals or detention facilities. GSR (Gun Shot Residue) Kits, Sexual Assault Kits, 35mm film cameras are typically used and CSI records serial and model information from weapons, vehicles and technical items, swabs drinking containers and other items suspected to contain DNA residuals, collects tire & shoe prints, and packages numerous material items in support of the investigation.

CSI itemizes and barcodes evidence upon return to the laboratory, this may not be done immediately upon return because the scene investigation may require considerably more hours than a single work shift. Evidence is itemized on a Detail Evidence Manifest (Form CR3) and items are bar-coded using preprinted labels prior to PETS entry. Barcode labels are color coded to designate evidence as either that of SBCSD (yellow stripe) or an external agency (blue). Evidence is separated by analytical discipline and/or storage requirements and a system of sub-lettering/numbering is used to designate sub sampling on the CR3. CSI may also detach/separate evidence suspected of containing DNA, technical and monetary evidence is segregated for separate storage. General Request Forms are utilized to specify testing desired, the laboratory may conduct/specify detailed methods of examination as the items investigate reveal the need.

A "Green Folder" original file is prepared and a Laboratory Request (LR) number drawn from the stack of folders prior to CR3 completion, the agency DR# being known and recorded on items/packages collected in the field. The CSI Investigator enters receipt demographics into the case tracking system. Collected evidence must be submitted to P&E within 14 days of collection, with the exception of officer's weapons which are submitted as soon as practical.

Property & Evidence designates and records the item's storage location in PETS and on the CR3; CSI may complete and submit priority assignment requests. CSI Investigators maintain a "Red Book" log of calls they've investigated. A peer and administrative review is required of reports generated by CSI. Figure 5 depicts the typical CSI case workflow.

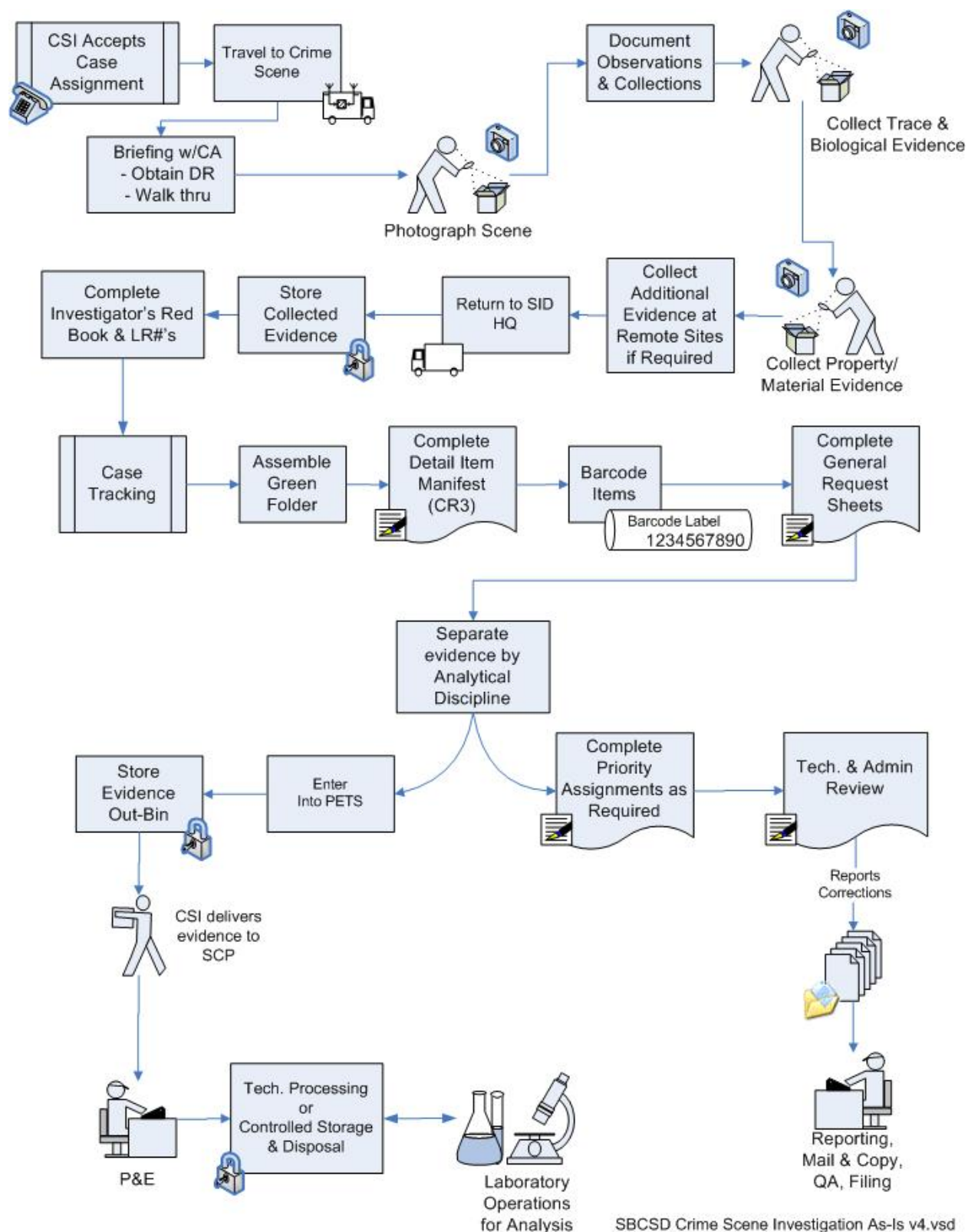


Figure 5 Crime Scene Investigations

2.2.3.2 Latent Print Development

The CSI personnel also perform latent fingerprint processing which may be accomplished immediately or postponed until work permits. Acceptable quality lifts are itemized into evidence inventory. A paper internal chain of custody is maintained on all items taken from or returned to CSI's evidence closet for latent print work. A peer and administrative review is required of reports generated by CSI. Figure 6 depicts this process.

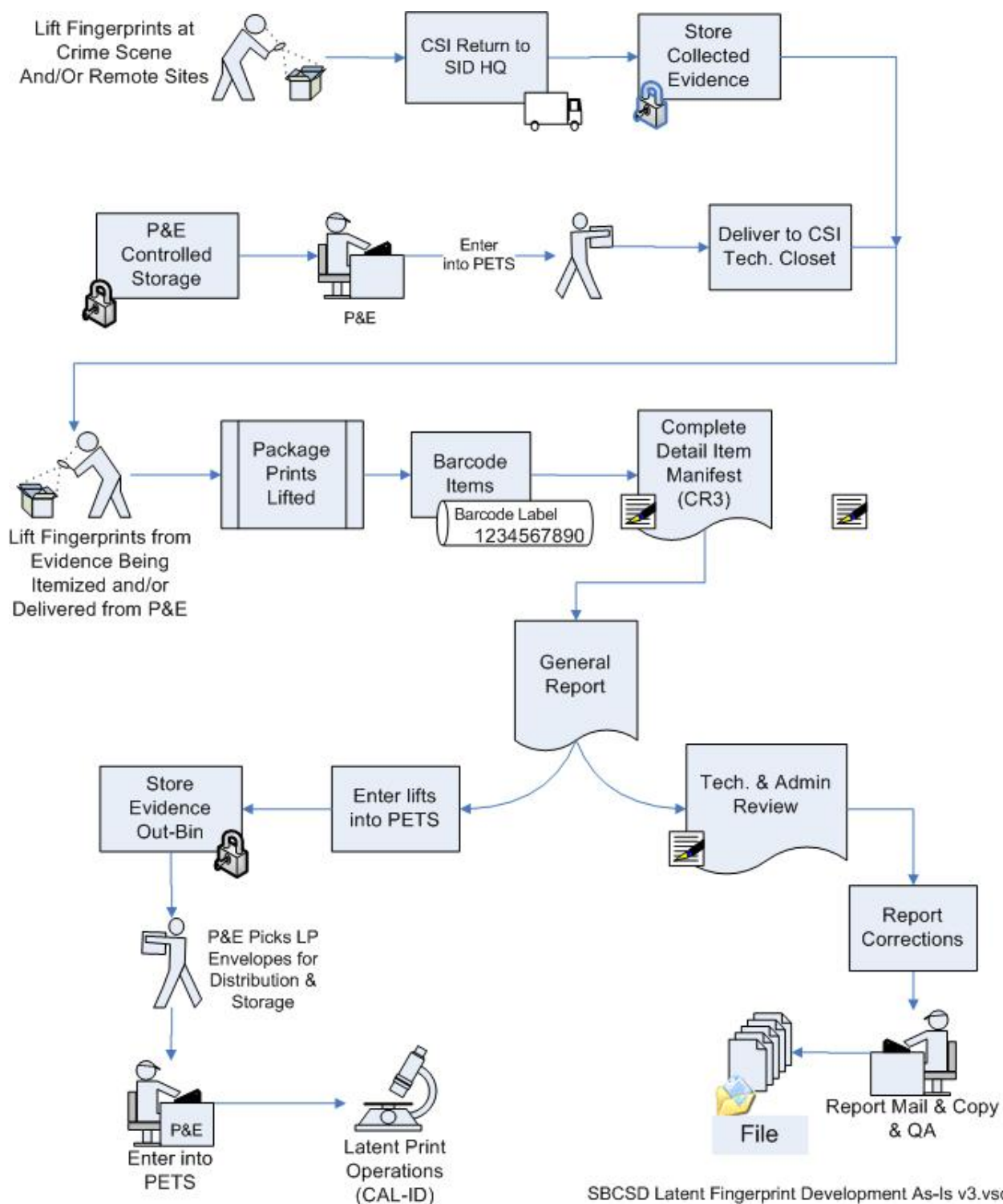


Figure 6 Latent Print Development

2.2.4 Clandestine Drug Laboratory Investigations

In addition to routine analytical identification of evidence described later in this document, SID Narcotics Criminalists are tasked with evidence collection at Clandestine Drug Laboratories and

smaller "Walk-In" Labs. Approximately 350 "Clan Lab" cases occurred annually in prior years, 60 occurred last year, each requiring two person teams to conduct sample collection, photography, safety assessments, print collection and air monitoring. Procedures similar to CSI Operations are utilized. Figure 7 represents the process of Clan Lab evidence generation.

SBCSD CLAN Lab Investigation As-Is v0.3.vsd

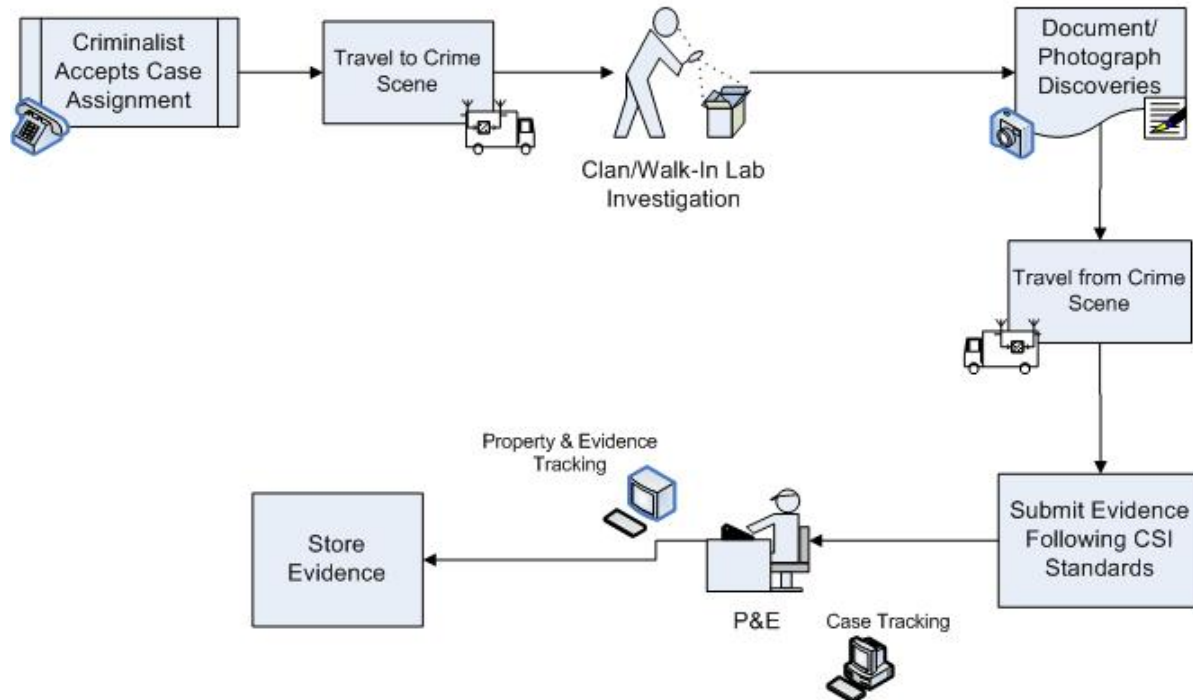


Figure 7 Clan Lab Evidence Collection

2.2.5 Property & Evidence Unit Operations

The Property and Evidence (P&E) unit has two functions: receipt and storage of evidence for analysis and receipt and holding of evidence without analysis. In order to do this P&E has the following main areas:

1. Evidence Receipt
 - a. For Analysis
 - b. For Holding
2. Evidence Staging for pickup by laboratory
3. Evidence Disposal

P&E receives evidence from many different sources:

1. Sheriff's Stations and Divisions
2. External Agencies
 - a. Police departments
 - b. Military bases
 - c. Railroad police

- d. College/University police
- e. California Highway Patrol
- f. School district police
- g. Probation

P&E prepares blood alcohol kits and sexual offense kits and is the 'sheriff stores' to distribute these materials, breath alcohol items and other consumables to the sheriff's divisions and external agencies.

The type of evidence submitted for analysis that P&E handles varies from case to case, but may include:

1. Blood alcohol samples
2. Narcotics
3. Firearms including fired cartridges, shell casings
4. Toolmark evidence
5. Trace Evidence
6. DNA (blood, saliva, semen, vaginal swabs, clothing with DNA evidence, etc)
7. Latent prints
8. Film

2.2.5.1 Evidence Receipt

The general flow of evidence is shown in Figure 8 and described below. Exceptions to the submission are described following this section. The legal chain of custody for evidence begins outside of P&E in the field. PETS is used at all Sheriff's Stations/Divisions that may submit evidence to SID and the station/division are responsible for initial entry of the items prior to transfer to P&E. External agencies do not have PETS access at present, but PETS use may be required of them in the future. Sheriff's Stations/Divisions and most external agencies apply their own barcoded labels to evidence before they submit it to P&E. P&E provides rolls of barcoded labels to each agency.

If evidence is submitted for analysis by the laboratory, the Sheriff's Stations/Divisions and external agencies complete a General Request Form (GRF - 'pink sheets' or a Request for Analysis (RFA - "green sheets") Form which is submitted with the packaged evidence, the last copy of the multipaged GFR or RFA is returned to the submitting agency as their receipt of delivery. If the submission is for storage, then no receipt is given. P&E does not open packaged evidence to verify recorded contents. P&E examines the packaging of the evidence to determine it is secured properly to prevent loss and to determine whether the packaging is acceptable. P&E will request the agency representative to repackage evidence during receipt or will direct that the material not be accepted for safety reasons or inability to conduct requested tests. The evidence is submitted to P&E, PETS is updated, and the evidence is accepted by P&E. The case tracking system is updated. If the case is new to the lab, then an LR number is assigned and entered into PETS. If the item is a part of an existing case the information in the case tracking system is updated by adding a new item number. The LR number is entered into PETS. The submitting agency receives a paper receipt if the evidence is submitted for analysis. The evidence is stored in the appropriate location which is noted in PETS. PETS is used to record interim storage locations, warehouse, and all transfers/movements.

Narcotics evidence is submitted with a barcode and a RFA form. LRN or Laboratory Result-Narcotics master log books are kept in loose leaf binders at P&E for logging in of suspected controlled substance cases. Submitters write information about submitted narcotics in the binders and their pages are pulled by P&E staff, reconciled against received narcotics evidence envelopes and the RFA form, entered into PETS and held in P&E for pick-up by analytical staff. The RFA forms are sent to the Narcotics Supervisor for distribution to the narcotics analysts. Marijuana Kits are directly vaulted in the warehouse until requested for testing by an Analyst. Narcotics evidence and marijuana kits are kept for one year unless a hold has been requested. Further information on the processing of narcotics evidence is outlined in the narcotics section (2.3.1).

Blood alcohol envelopes/kits are not processed by P&E and do not receive a barcoded label. They are placed into one way drop box located in property. The submitter completes the chain of custody located on the envelope before placing the envelope in the drop box. Further information on the processing of the blood alcohol envelopes is in the blood alcohol section (2.3.2). Currently blood alcohol envelopes are processed by laboratory staff without entry into PETS but the LIMS should allow this entry in the future.

Film evidence is not processed by P&E. They are placed into one way drop box located in property. The submitter completes the chain of custody located on the envelope before placing the envelope in the drop box. Further information on film processing is in the photography evidence section (2.2.5.3).

Evidence submitted by the SID's CSI and clandestine laboratory (clan lab) units are barcoded, recorded on CR3 form(s), a GRF and/or an ICOCS (internal chain of custody sheet "blue sheet") is completed by the CSI or Clan Lab personnel. CSI or clan lab submitter takes the evidence to P&E and submits it in the same manner as a Sheriff's station. Clan Lab samples are not taken to P&E only the necessary paperwork is taken to P&E due to the nature of the clan lab samples. CSI has access to PETS to enter in the evidence, clan lab personnel does not. Both CSI and clan lab personnel can enter in the data into the case tracking system.

PETS permits editing by P&E Supervision and designated SID staff.

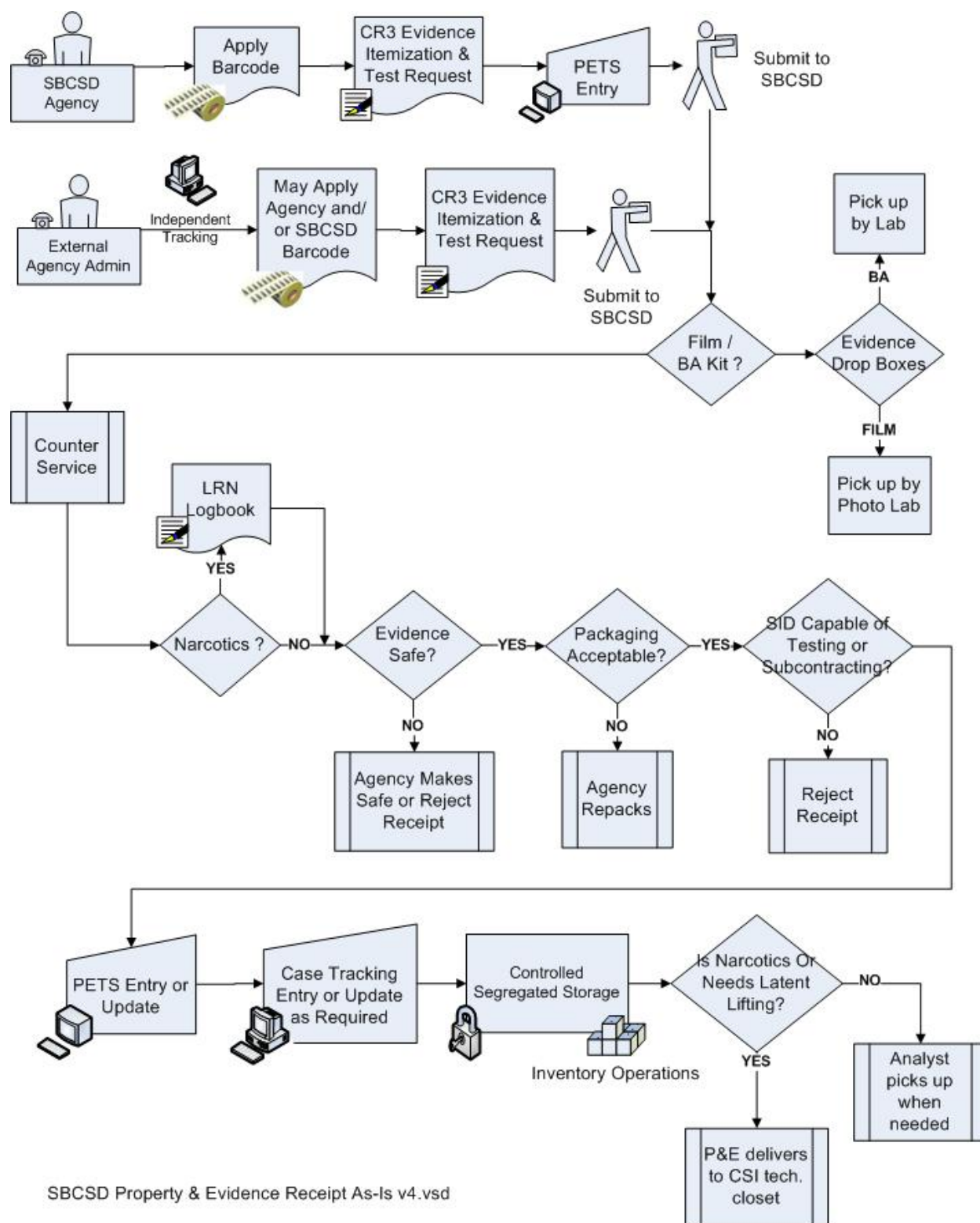


Figure 8 Property & Evidence Receiving

2.2.5.2 Property & Evidence Processing

Tested and resealed narcotics evidence is placed in the analyst's transit locker by the analyst and this transfer is noted on the analyst's LRN worksheet. The P&E custodian picks the evidence up and this transfer is recorded in PETS and the material is chained (custody transferred to) to a warehouse storage vault, boxed and filed by month received. Narcotics evidence is kept for one year unless a hold has been placed on it.

Tested and resealed CSI Cage "Out" evidence is collected, recorded in PETS and 'Tech' items (submitted for fingerprint processing only) are transferred back to the submitting agency immediately. The exception being if SID routinely stores the evidence for the submitting agency, then "Tech" evidence is stored in the warehouse.

All other evidence is warehoused appropriately and the laboratory requests are forwarded to the intended area Supervisor for test assignments. Laboratory staff usually requests evidence from P&E through email. The evidence is staged for pickup by removing the evidence from its storage location and placing it into temporary storage near the front of the P&E **receiving** area. The analyst comes to the P&E counter usually with an ICOCS, receives the evidence and P&E records the transfer in PETS and on the ICOCS.

Occasionally, narcotics evidence is set aside for sting operations or dog training and is placed in the sting locker in the vault. The narcotics evidence for sting is set aside by a request by the narcotics section of SID due to the large quantity of the drugs. IRNET uses this narcotics evidence for stings and a two custodian witnesses are required to check sting material out, one to physically access the vault and a second to access the "sting locker" within the vault. SID Narcotics staff may be tasked with cutting, separating and packaging sting drugs.

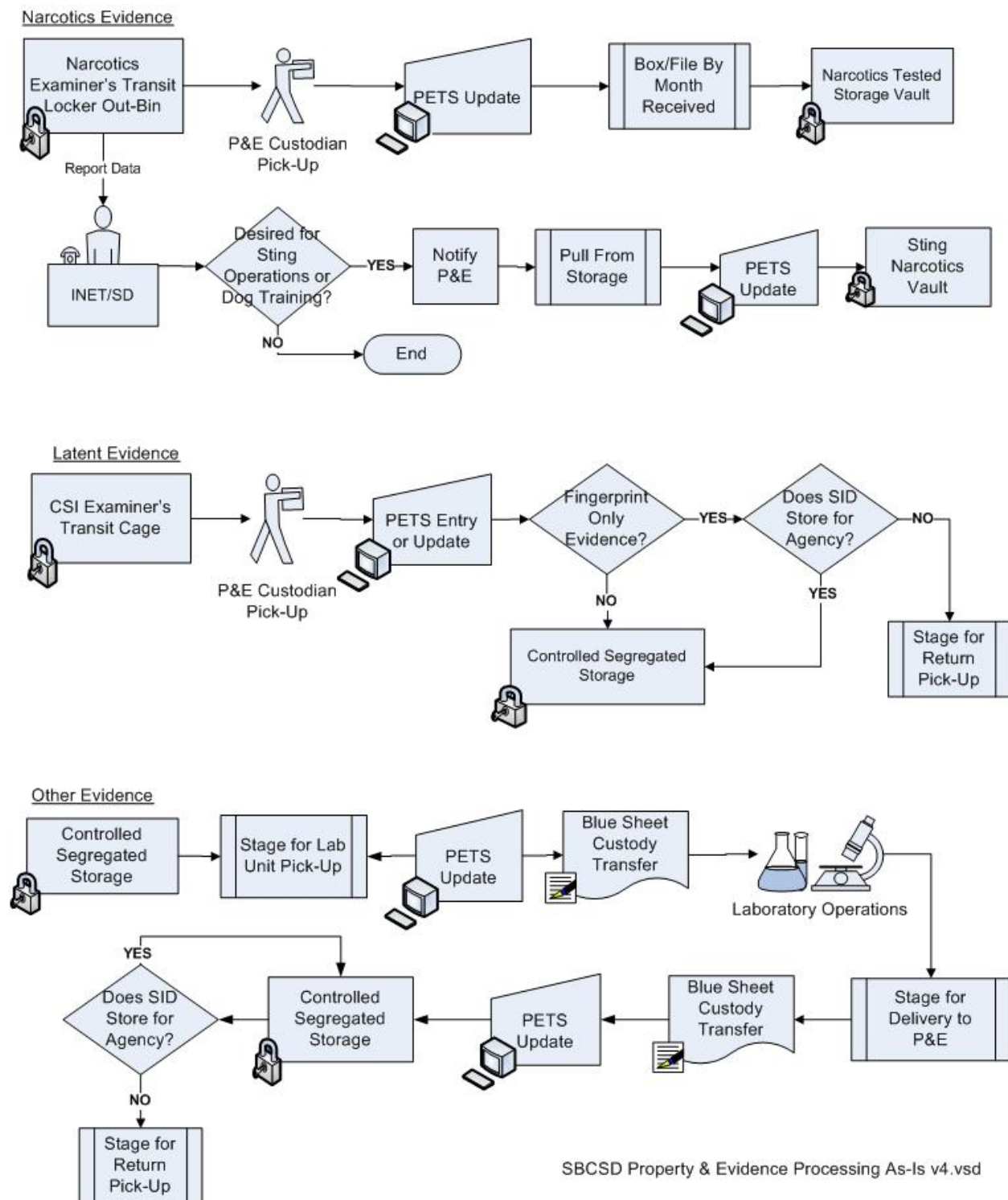


Figure 9 Property & Evidence Processing

2.2.5.3 Photography Unit Operations

The Photo Lab is a functional operation of P&E and evidence submitted to the Photo Lab does not cross the property counter and is not logged into PETS at its delivery. The submitting agency submits the film rolls in a film envelope, completes the chain of custody and descriptive information on the envelope, and places the sealed envelopes in a one way drop box within P&E front counter area. Approximately 1500 rolls of film are received and processed monthly. The quantity of film bags/envelopes received daily currently precludes PETS entry during receipt.

The film processor picks-up film from the drop box, verifies the presence of a case number on the envelope and barcodes the envelope with as many color coded individual barcoded labels as there are rolls. The color coding indicates whether the submitting organization is CSI (blue) or not (yellow). This does not follow the barcode color coding for other evidence delivered to P&E.

All film rolls are processed to produce negatives but not all negatives are processed into prints. Photo printing is selective and depends on the crime. Before the film is removed from the original container, the beginning section of the film is labeled with a duplicate label of the barcode placed on the envelope. The film is placed into the developing machine and the negatives are developed. The negative is returned to the envelope then entered in PETS. An indexing label supplied by property is applied to the envelope and the envelope is filed in boxes in the photo lab. PETS is updated with the indexing label number. The indexing label indicates the box in which the envelope is stored. Additional storage is upstairs at the crime lab. If SBCSD CSI personnel or Clan Lab criminalists take photographs at a scene for an external agency, the negatives will be returned to that agency. Negatives are not released to SBCSD agencies, only prints are.

In the Photography Unit prints are reviewed against the first frame by the film processor. CSI will review every frame against their prints. Non-CSI prints are take the place of a report and no peer or administrative reviews are conducted on them. CSI prints are chained to the Investigator's individual photographic evidence box on as ICOCS (internal chain of custody – blue sheet), and in PETS. The Investigator conducts the peer review of them with the report.

Most photography negatives are purged with approval after 7 years in accordance with the P&E disposal procedure. Homicide, rape, officer involved shootings and those with a hold placed by SBSD's Civil Liabilities are held for additional time.

The Photo Lab is currently implementing a Digital Image Management System (DIMS). Operations with DIMS will treat the digital camera's 2GB memory cards as rolls of film, each are permanently serialized and are not likely to be barcoded. Card processing will produce two compact disks or DVDs with one being stored for archival purposes and the other returned to the agency. Prints may also be published. Card downloads will be stored on DIMS SAN disks for no more than 14 days. The card memory will be cleared prior to returning it to the agency for re-use. Images on DIMS storage-area-network (SAN) will be duplicated on offsite storage. While all agencies will become digital eventually, resource constraints will keep the need for film processing in the interim.

The CSI section is currently all digital and submits either DVDs or CD to the photo lab and they are barcoded in the same manner as the film, but the barcode goes on the jewel case of the DVD or CD not on the CD. The CD/DVD has the pertinent information written on it for identification.

Photo Lab Section also receives digital media (CD's, DVDs, floppy disks, etc) from SBSD agencies/stations. These items are barcoded with one label on the envelope and one label on the media/jewel case for the media. The envelope is given an index label and data entry is made into PETS for the barcode and index label. The envelope is stored with the other film envelopes.

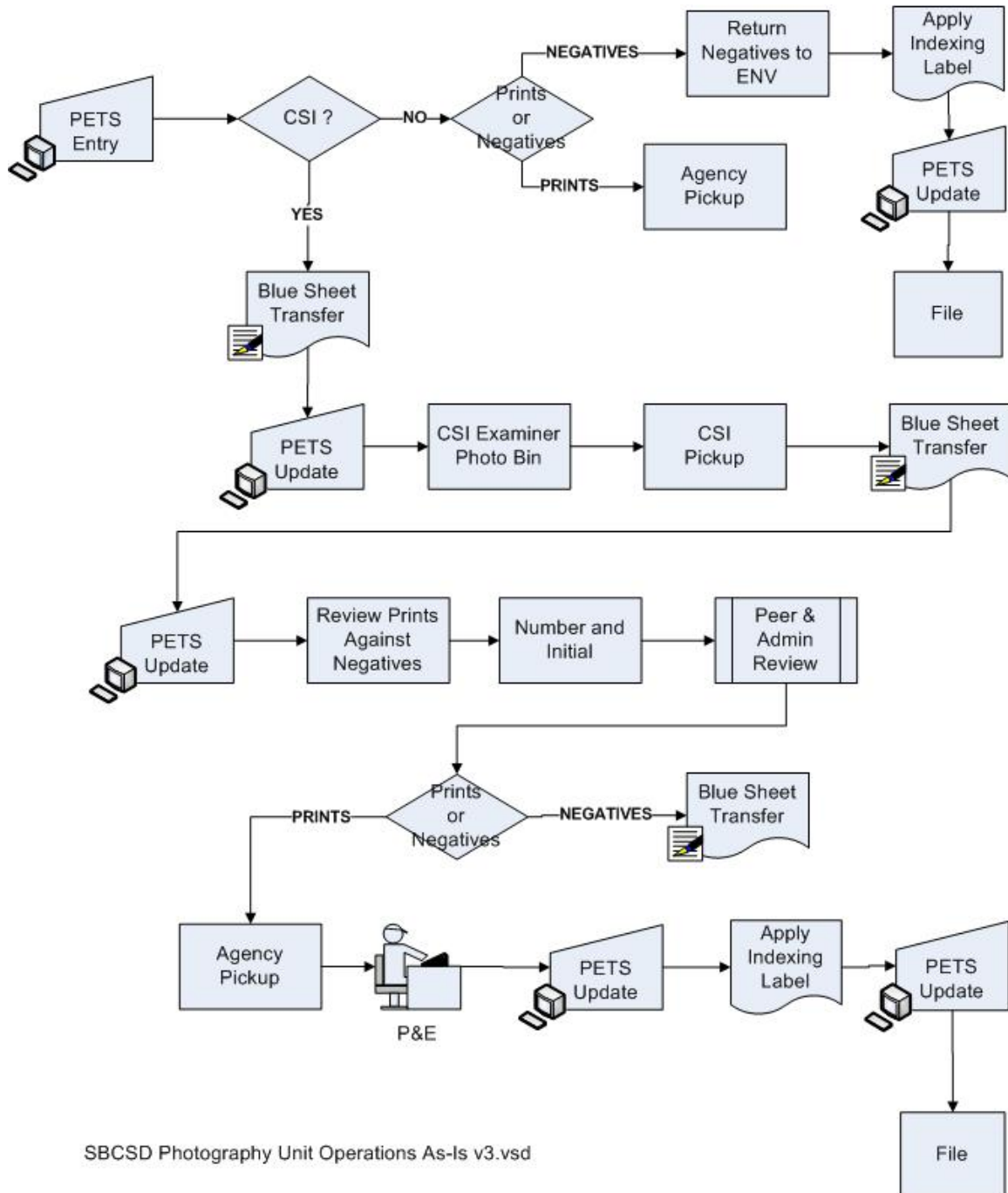


Figure 10 Photography Unit Operations

2.2.5.4 Property & Evidence Holding

P&E does not have any present concerns regarding re-imbursement of costs associated with material storage, they are permitted to charge for weapons storage but do not. PETS produces a quarterly vault audit report for custodian verification. Searches for materials in PETS are cumbersome because multiple screens are accessed during searching, and most searches only

produce printed results. The ability to find material tied to suspects, victims or witnesses is not available in PETS.

With exceptions, evidence is typically returned to the submitting external agency after testing or may be stored until the case is adjudicated. External agency materials not yet tested (low priority) are stored for six months then returned if no exception for holding is received. Sheriff's Department evidence can be stored indefinitely. P&E stores material for Highland and Central Sheriff's Stations, Narcotics Divisions, SBSB Detention Centers, specialized divisions, Coroners, etc. Sheriff's Deputies or Detectives responsible for the case determine when to dispose evidence, by initialing PETS generated approval sheets. PETS generates a batched report sorted by Deputy employee number which is sent to the Deputy to designate if the item is to be released, destroyed or held.

Biological evidence involving homicides is kept in frozen storage for 5 years for external agencies. Biological evidence from all other crimes is kept in the freezer for 2 years for external agencies. SBSB biological evidence is retained until destruction is authorized by a PETS batch report or CR4 (SBSB Release or Disposition form)

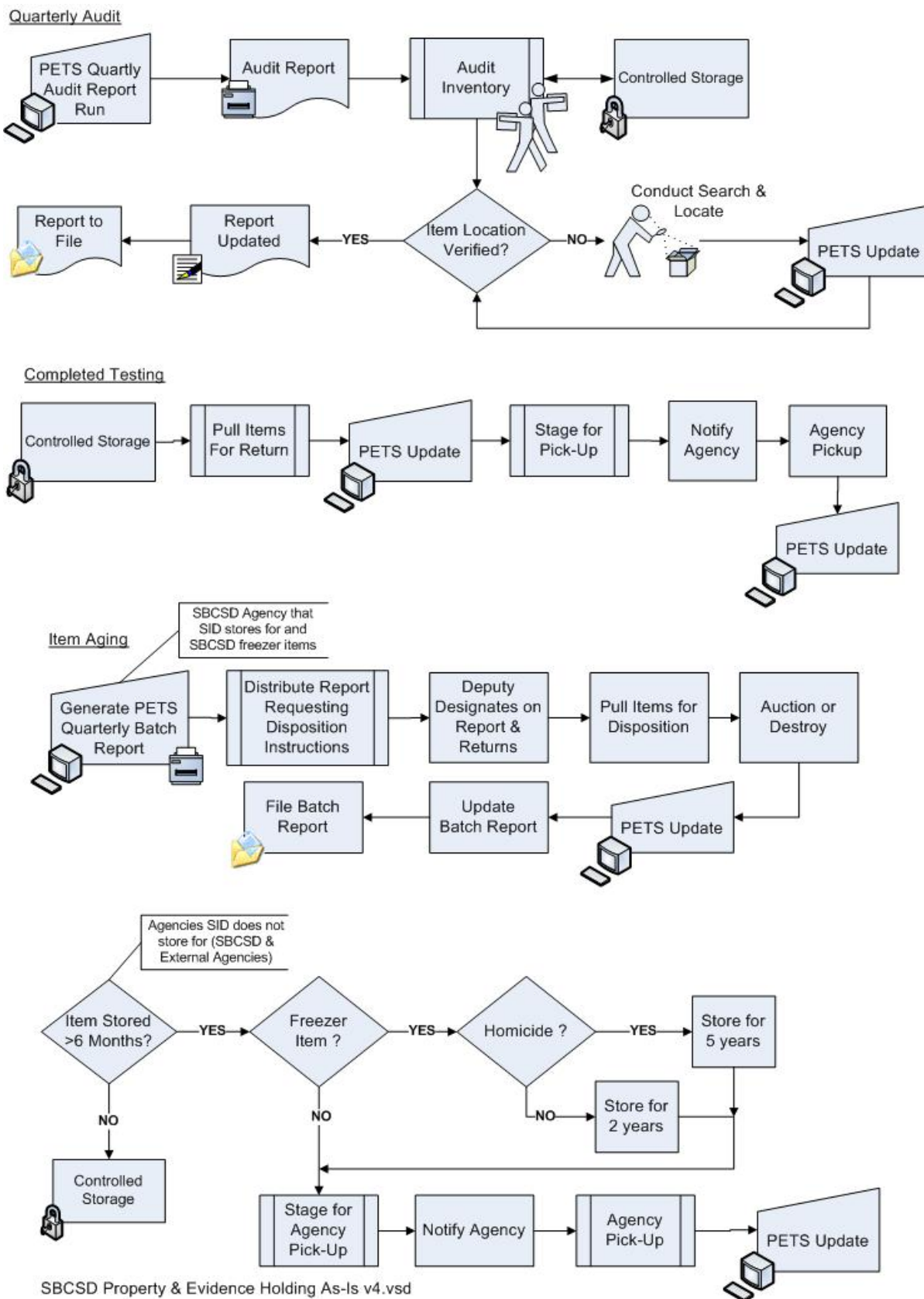


Figure 11 Property & Evidence Holding

2.2.5.5 Property & Evidence Disposition

Verbal permission is not accepted for evidence disposition. Biological evidence to be destroyed is transferred to a contracted hazardous waste disposal company. After one year blood alcohol (BA) vials are destroyed by laboratory personnel by placing the vials into biological waste containers located in the laboratory unless a hold has been placed on the blood vial. Blood alcohol vials for homicides and vehicular manslaughter cases are held indefinitely.

Stolen weapons are returned to the agency/victim, all other weapons are destroyed. Weapons and other evidence received from external agencies can be returned via the US Postal Service.

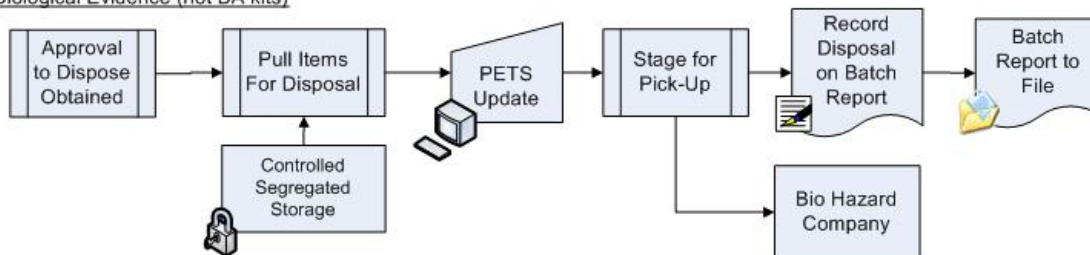
Property is auctioned, returned or destroyed depending on its type. Auctionable items, weapons and drugs are submitted to P&E for disposition. All other evidence is disposed by the agency. For the items going to P&E, the agency does a closeout and transfers the item to P&E through PETS. Upon delivery of the item to P&E, PETS is updated to show receipt of the item and shown that the evidence is located in the dispose location. Disposition evidence is transferred to a contractor for auctioning without six-month hold. An itemized paper log is maintained for these transfers and the contractor returns a check to the Sheriff's Department for a portion of the sales with an itemized list of what was sold and how much was received for each item.

Narcotics evidence is destroyed after 1 year unless a hold is requested. No notification of this destruction is given to the agencies. All Narcotics RFAs carry a warning that evidence will be destroyed in 1 year unless otherwise requested. Narcotics bins holding evidence greater than 1 year old are pulled, inventoried against PETS, the report is highlighted to indicate which box contains the evidence, material marked for holding or inclusion in "sting" or canine supply is returned to storage, and the remaining boxes are transported under escort to the burn site. P&E manages the 2 person process of narcotics disposal which is authorized by an annual district court order.

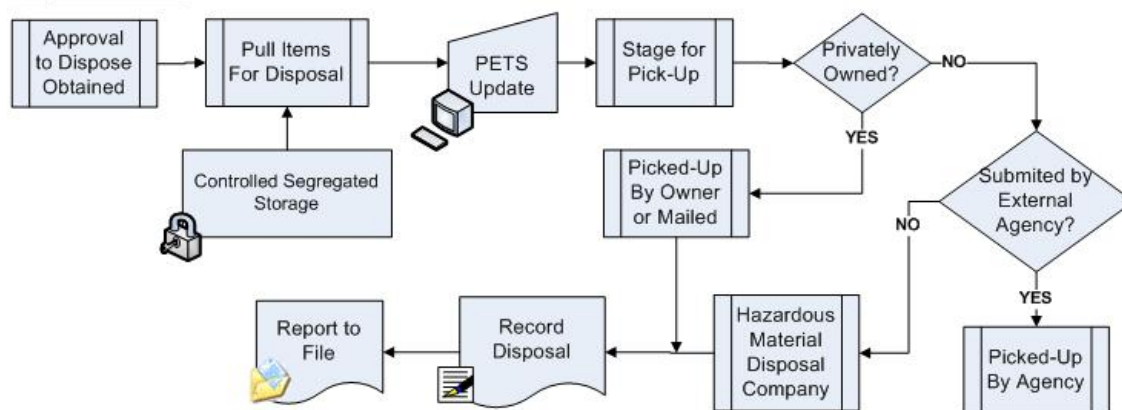
Money found by SBSD agencies/stations is submitted to P&E in a money envelope. This may be money found on a suspect or at a crime scene. The envelope is barcoded and submitted to P&E. If SID personnel finds money in the evidence during analysis, the money is counted, a second person verifies the amount by dating and initialing the notes, a CR3 form is completed and the money is submitted to P&E in a barcoded money envelope. The money envelope is entered into PETS and stored in the appropriate location. Two P&E staff members count the money and remove it from the envelopes. The money amount is entered into PETS and a batch report is printed. The total of money on the batch report is tallied against the tally of the envelope money tally and the tally by the count by the P&E staff. Corrections are made. A deposit is made by a P&E employee who is given a D number which is entered into PETS. A suspect may ask for the money that was received from him and if approved by the arresting deputy, a court order is given to P&E. P&E has the county auditors to cut a check which is send to the defendant, a warrant number is updated for the money envelope barcode in PETS and the barcode is closed out. If the case is closed out by the deputy on a batch report or on a CR4, the 'money' is moved to a final disposition location and at the end of the yearly a final

deposit of all of the closed out money is released to the general SBCSD fund by a court order. The Barcodes are closed out in PETS.

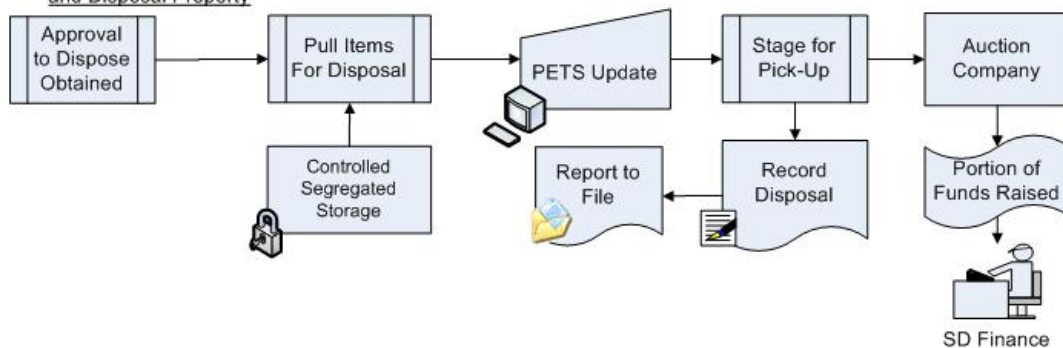
Biological Evidence (not BA kits)



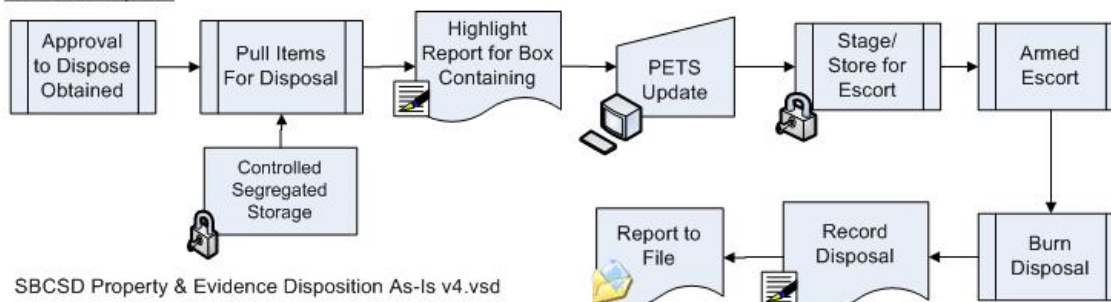
Weapons Evidence



Unclaimed Property & Evidence and Disposal Property



Narcotics Disposal



SBCSD Property & Evidence Disposition As-Is v4.vsd

Figure 12 Property & Evidence Disposal

2.3 *SID Laboratory Analytical Operations*

2.3.1 Narcotics Unit Operations

Narcotics/controlled substance evidence is submitted by investigating agencies to SID Property and Evidence Unit (P&E). The agency's submitter utilizes the next available LRN (Laboratory Number – Narcotics) from a hardcopy register, and submits the envelope containing the evidence with a Request for Analysis form "green sheet" (a multicopy carbonless form containing sections for requested analysis, description of evidence, and laboratory results.). If not already done by the agency, P&E affixes a preprinted and color coded SBSB barcode label to the evidence package. Most agencies have a roll of preprinted color coded SBSB barcode labels and they affix the barcode to the envelope before delivery to SID. The SBSB barcode is recorded on the Request for Analysis form. The agency is given the last copy of the Request for Analysis form to show receipt of the evidence

P&E personnel place packages in a locked drop box after PETS update entry, there is no entry into the case tracking system. Property periodically empties the drop box, checks the LRN log against the evidence and the Request for Analysis form for any transcription errors, then holds the evidence for pickup by analysts. The evidence is placed in a temporary area for pick up by analyst. This storage is not recorded in PETS.

The Request for Analysis forms are brought daily to the Narcotics Unit Supervisor for assignment to analysts. The assigned Narcotics Unit supervisor divides the received Request for Analysis form between available analysts and is recorded in a paper logbook. Exceptions to even distribution may be due to size of the evidence, training status of the analyst, or personnel leave status. The supervisor places the Request for Analysis form in a manila LRN folder corresponding to the LRN number on the Request for Analysis form and places the LRN folder in the assigned analyst's mailbox. The manila LRN folder was prepared by the clerical staff who stamped the folder with the LRN number and inserted a LRN worksheet with the same LRN as stamped on the folder. The LRN worksheets are prepared through a mail merge using MS Word and MS Excel.

The analyst walks to property with the LRN folder(s) to pickup the narcotics evidence. P&E pulls the evidence, updates PETS to show the transfer from the drop box to the analyst, and gives the evidence to the analyst. The analyst can either show this transfer on an ICOCS or on the LRN worksheet. The analyst stores the evidence until completion of analysis in their storage locker. The daily removal of the evidence from the storage locker for analysis and return for storage is not recorded.

Analysts can exchange cases between each other. This transfer is noted on the ICOCS ('blue sheet')

The workload is approximately 1000 narcotic cases per month analyzed by 6 examiners using the LRN worksheet the analyst records the weight of the evidence on an analytical balance or scale appropriate for the mass received. Total gross weight, individual gross weights and net weights may all be recorded for one LRN case.

Not all items in a case are analyzed. The number of items to be analyzed is left to the discretion of the individual analyst but generally one to two items per suspect is the minimum for analysis. The analyst has the option to not analyze the evidence if its net weight is less than 0.03 g for methamphetamine and cocaine salt, 0.01 g for cocaine base and heroin. Typically the workflow follows a series of presumptive color tests, microcrystal tests and thin layer chromatography to determine the identity of the controlled substance, if any. Any observations are recorded on the LRN worksheet.

Gas chromatography/mass spectrometry (GC/MS) or infra-red spectrometry (IR) methodologies may also be employed. Printouts from the instrumentation is given a page number, a LRN number, the date and analyst's initials and included in the LRN folder.

Over the counter and prescription tablets may be identified through a PDR, DEA Drug Logo Index or an online database at Identadrug.com. The results are recorded on the LRN worksheet. The webpage from Identadrug.com showing the identity of the tablet is included in the LRN folder.

The recommended minimum number of tests required to positively identify a controlled substance is one color test, and two of the following: two crystal tests, a Thin Layer Chromatogram (TLC), a Fourier Transformation Infra-Red (FTIR) spectrogram, or a gas chromatography with mass spectral detection (GC/MS). A NCOCS (no commonly occurring controlled substance) analysis requires a negative reading for six color tests and either a negative TLC or GC/MS.

Evidence is returned by the analyst to his/her transit locker or may be delivered by the analyst to P&E. This transfer to the transit locker is noted by the analyst on the LRN worksheet. An ICOCS is used if the evidence is taken to P&E who records the transfer in PETS.

Results are written on the LRN worksheet and all necessary lines on the worksheet are completed.

Property retrieves the evidence from the analyst's transit locker and notes this transfer in PETS. Property securely stores narcotics evidence for future controlled disposal/destruction. If a hold is not placed on the evidence, the evidence is destroyed in one year from the date it was delivered to property.

The analyst records on a paper log the number of items analyzed in specific LRN, the controlled substance found and the approximate time for analysis. This log is given to clerical who enters the data in a database for monthly statistics for each analyst.

The LRN folder with the Request for Analysis form and analytical results (LRN worksheet and any analytical data (instrumentation printouts, Ident-a-drug printouts, etc.) are submitted for a technical review (usually done by Narcotics Unit Supervisor). The reviewer reviews the report for accuracy and technical aspects. The reviewer dates and initials the LRN worksheet indicating approval for typing by clerical staff.

The reviewer places the LRN folder in a tray for the clerical staff to type the analyst's result(s) on the Request for Analysis form. The LRN folder and typed Request for Analysis form are returned to the analyst for the administrative review. The analyst signs the Request for Analysis form showing the report has been accurately typed and returns the LRN folder to a tray in the clerical office. A typing log is completed by the typist who notes the date the LRN was typed.

The clerical staff separates the Request for Analysis form copies and sends one copy to the district attorney's office and one to the submitting agency. The original (top copy) is stapled in the inner left hand side of the LRN folder. The LRN worksheet and analytical data are stapled on the inner right hand side of the LRN folder. The LRN folder is filed into a filing cabinet by LRN number. The LRN folders are kept onsite for three years then the folders are stripped to remove the paperwork from the folder. The paperwork is sent out to be scanned, and then destroyed once the scanning process has been verified.

Customer agencies often contact the laboratory by phone for confirmation that submitted evidence contains illicit compounds

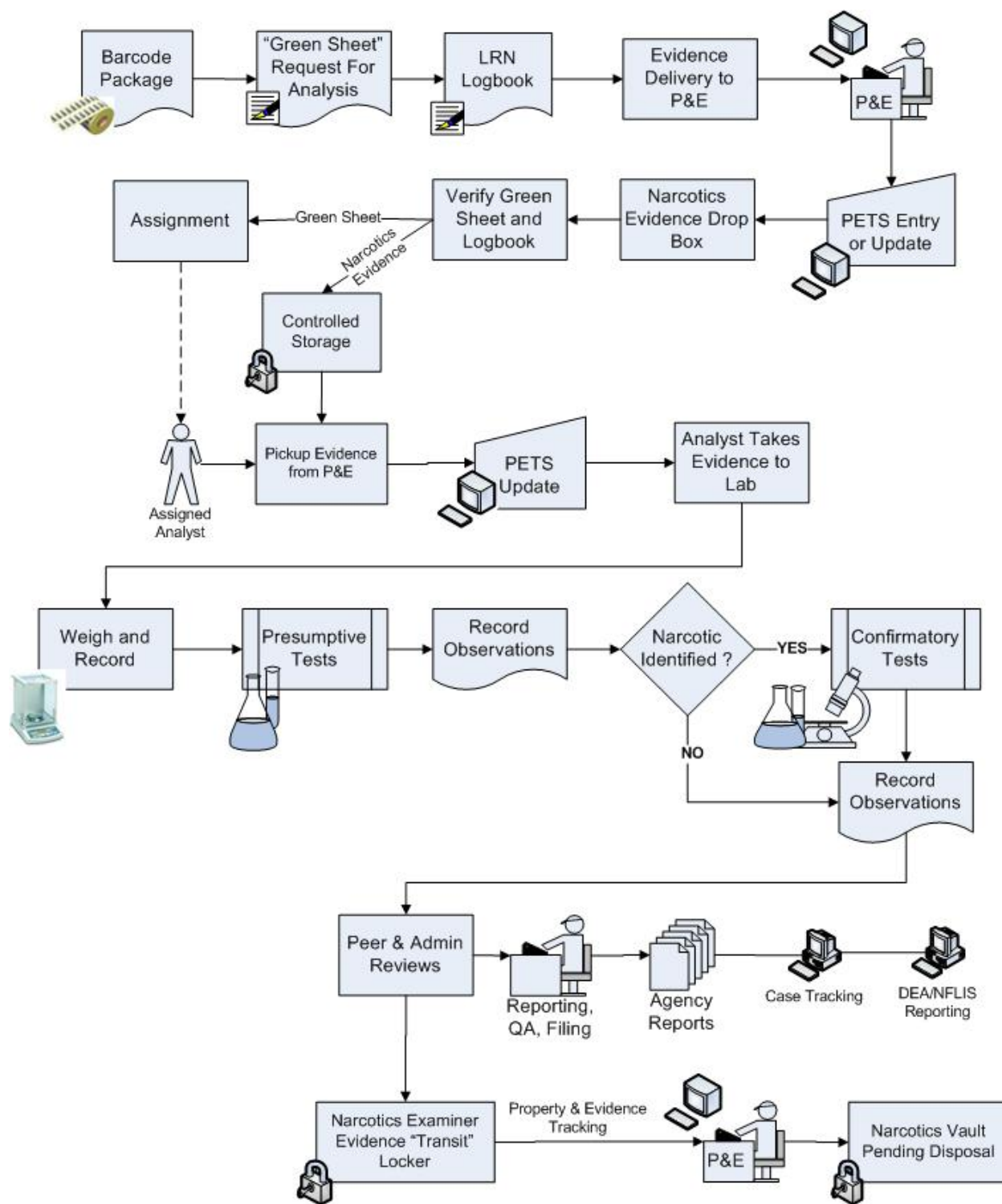
Narcotic analysis information is reported monthly to the DEA via the National Forensic Laboratory Information System (NFLIS).

Analysis of Marijuana Kits

P&E provides Marijuana Kit envelopes to SBCSD and outside agencies for submission of marijuana evidence for offenses under 23222 CVC, 11357 (b), 11360 (c) and are for marijuana evidence weighing less than one ounce. The kit is a 6"x8" envelope with a form printed on the envelope. A Marijuana Kit Number is stamped on the envelope by P&E. The submitting agency delivers the Marijuana Kit to P&E. The Marijuana Kit is date stamped by P&E and initialed by the person receiving at the counter. P&E files the Marijuana Kit by the Marijuana Kit number in a box labeled for the current month. The submitting agency or District Attorney's office requests the analysis of a specific Marijuana Kit. The Marijuana Kit is assigned to a controlled substance analyst by the receipt of a dark brown Marijuana Kit manila folder in his/her mailbox. The Marijuana Kit folder has an empty Request For Analysis form and a blank LRN Worksheet.

The analyst requests the Marijuana Kit by email or phone giving the Marijuana Kit number, date of offense and defendant's name and completes an ICOCS (Blue sheet). P&E stages the Marijuana Kit for pickup. The analyst picks the Marijuana Kit at P&E. The transfer is recorded on the ICOCS and in the Marijuana Kit Logbook. The analyst performs a microscopic examination and a color test. Further testing can be done but is usually limited to these two tests. The analyst records results on the LRN Worksheet and all necessary lines on the LRN Worksheet are completed. The evidence is returned to P&E by the analyst and this transfer is recorded on the ICOCS and the Marijuana Kit Logbook. The MJ kit is returned to the box it was pulled from and is destroyed in one year after receipt by P&E.

Figure 13 diagrams the process flows of narcotics analyses.



SBCSD Narcotics Unit Operations As-Is v4.vsd

Figure 13 Narcotics Analysis

2.3.2 Blood Alcohol Unit Operations

Blood alcohol kits are prepared by P&E. The kit contains the materials used in the collection of the sample including an envelope and a blood collection vial both stamped with the same BA (blood alcohol) kit number. The kits are distributed by P&E to SBSD agencies, outside agencies, and LEMS (Law Enforcement Medical Services).

The blood sample is collected using the blood alcohol kit in about 90% of the collections. Sometimes an envelope is delivered to SID containing a non SBSD kit vial or two or more blood vials. This is noted on the envelope when the envelope is opened by laboratory staff. Approximately 750 to 1000 samples are submitted monthly.

The front of the blood alcohol envelope is completed by the officer and the nurse or phlebotomist who collected the specimen. The blood vial is placed in the envelope and the envelope sealed.

The envelope is either taken by the officer to go through the evidence process at their agency or is placed into a blood alcohol drop box at a detention center. The crime lab picks up at the detention centers once a week. Samples can be mailed to the crime lab.

The agency delivers blood alcohol envelope to SID, completes the chain of custody on the envelope and places it into the blood alcohol drop box in P&E. Blood vials are not bar-coded, handled by P&E staff, or entered into PETS.

Laboratory staff (usually the breath or blood alcohol criminalist) retrieves the blood alcohol envelopes from the blood alcohol drop box, sorts them according to submitting agency and opens the envelope. The blood vial and envelope are given the next sequential LRB (Laboratory Report Blood) number. LRB number has the format of YYMM-XXXX where YY= the last two numbers of the year, MM= the two digit number for the month, and XXXX is a sequential number starting each month at 0001. The subject's name and BA kit number on the vial are compared to subject's name and BA kit number on the envelope. If a discrepancy is found, it is noted on the envelope.

The vials are placed in sequential order in test tube racks and stored in the laboratory walk-in refrigerator.

The envelopes are given to the clerical staff who enters in specific data from the envelope into the blood alcohol database system. The envelopes are stored in boxes and are destroyed after three years unless the offense was a homicide or vehicular manslaughter case.

The blood vials are removed from the refrigerator and the analysis is conducted in batched/duplicate processing by direct injection GC. The analyst uses a Blood Alcohol Worksheet (printed by the analyst from a Visual Basic program) to record the subject's name and blood alcohol kit number from the vial during the sample preparation and to record the results of the analysis from the integrator printouts. Before a result is recorded the analyst checks the two results to make sure they are within 5% of the lower number. If this is true, the result is a truncated (2 digits after the decimal place) average of the duplicate analysis and written on the Blood Alcohol Worksheet. If not true, the sample is reanalyzed using fresh

duplicate samples and a new Blood Alcohol Worksheet. The worksheet is also used to show the transfer of the blood vials by the analyst to and from the refrigerator. The worksheet has an area for the calibration data, instrument name, date of analysis and analyst's initials.

Quality assurance measures for the blood alcohol program include the following:

- A mix of 5 compounds is analyzed on the 1st and 15th of each month.
- A ~0.02% alcohol concentration is analyzed on the 1st and 15th of each month. This is recorded in a log book
- Three standards are analyzed in duplicate before samples are analyzed each day. This is recorded in a log book
- A quality control reference material is analyzed in duplicate before samples are analyzed each day
- A quality control reference material is analyzed as the first, middle and last sample of each batch of samples
- A blank is analyzed as the sample after the middle quality control reference material in each batch of samples
- The duplicate analysis of the samples must be within 5% of the lower value.
- The high and low analysis of the quality control reference materials analyzed for the day is recorded along with the average of the high and low analysis

The vials are returned to the refrigerator and are disposed by laboratory staff after 1 year retention unless a one year hold has been requested or held indefinitely if the original charge was a homicide or vehicular manslaughter.

The worksheets and the integrator printouts are technically reviewed for agreement of the two results, transcription errors, proper calibration of instrument, proper value of QA, correct truncation and completeness of the worksheet. The worksheets are given to the clerical staff for entry of the result, date of analysis and analyst's name in to the blood alcohol database. The integrator printouts are returned to the analyst for storage (3 years).

A Laboratory Master Log is printed out. This Master Log lists the result of the analysis on the Blood Alcohol Worksheet along with data that was entered earlier from the envelope. The Master Log and the Blood Alcohol Worksheet are given to the original analyst who reviews for accuracy against the worksheet. At this time, 'codes' can be requested by the analyst to be entered into the database. These codes can indicate:

1	A sample only (applies only to urine samples).
2	Insufficient sample for analysis.
3	Broken in transit.
4	Kit # different on vial and envelope (kit # on envelope will be entered in system).
5	Please call lab for results. Should only be used for significant concerns. For example, peaks other than ethanol present, sample consistency of paste, unable to sample, names completely different on vial and envelope, vial appears to have been tampered with.
6	Not an S.B. County kit or vial

When an item is coded, the numerical blood alcohol result is not reported on the report sent to the agency, DA office, court and/or DMV. A supplemental report will be sent out when requested by the agency, DAs office, court, or DMV. The supplemental report is created by the analyst to describe the reason for the code and a result is given at that time. The supplemental report is typed at the bottom of the blood alcohol report specific for that LRB.

Once the analyst has signed the Master Log, the clerical staff generates individual, validated, and approved (paper) reports to the DA, courts, and Department of Motor Vehicles (DMV). The DMV only receives blood alcohol reports for cases where the offense is driving under the influence. A copy of all reports sent the DMV are kept by the clerical staff. The worksheets are returned to the analysts for storage (3 years).

Monthly reports are prepared by the clerical staff through the blood alcohol database showing the turnaround time and monthly statistics.

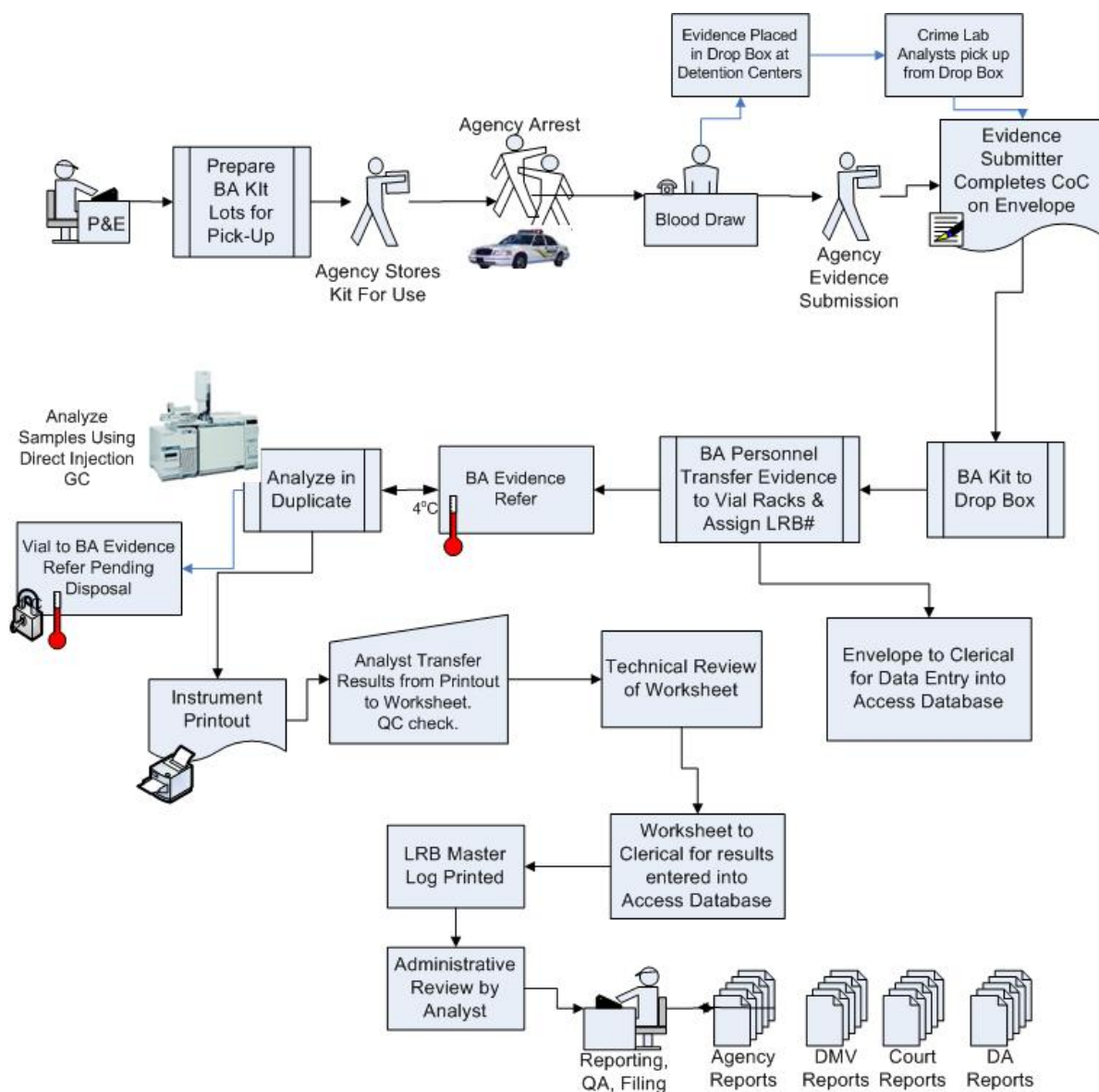
DAs, Investigators, and defense attorneys can request a split of the sample for further testing of the BA sample at an outside laboratory. Split requests are given to the current blood alcohol analyst who removes the blood vial from the refrigerator and notes this transfer from the refrigerator to the blood alcohol area on the split request. Approximately two milliliters of blood is placed into a screw capped 'split' vial which is labeled with the subject's name, the blood alcohol kit number, the LRB, the splitter's initials and the date of the split. If there is not enough sample to provide, the DA is called for permission to send the entire sample. The original vial is labeled to show a split was done with the words "Split", the splitter's initials and the date of the split. The original vial is returned to the refrigerator and this transfer is noted on the split request. The split vial is properly packaged and a copy of the split request is packaged with it. The vials are either mailed or there is a drop box in P&E for splits that are being sent to Bio-Tox Laboratory.

The disposal of the blood alcohol vials, envelopes and paperwork is done by the alcohol staff. Blood alcohol vials are kept for one year unless a one year hold has been placed on it or it is kept indefinitely if the offense is a homicide or vehicular manslaughter. The disposal is noted in the master log by placing either a vertical line next to the LRB number in the left hand margin of the Master Log sheet. The Master Log page is stamped with a destruction stamp, the stamp is dated and initials by the person(s) doing the disposal of the vial. The envelopes are destroyed after three years unless a hold has been placed on it or it is kept indefinitely if the offense is a homicide or vehicular manslaughter. The destruction of the envelope is noted in the master log by placing a horizontal line through the already created horizontal line. The destruction stamp already present on the page is completed for the destruction of the envelopes. If the vial or envelope cannot be found, this is shown in the master log by "NIF" in the left hand margin for "not in file". If a vial/envelope is kept, this is shown in the master log with a "SOF" in the left hand margin for "still on file". Either of these notations is dated and initialed. The vials are kept in the walk in refrigerator. The envelopes are kept in storage. The discarded vials are placed into a red biohazard bag and placed in the biohazard disposal area. The envelopes are placed into a shred box and shredded.

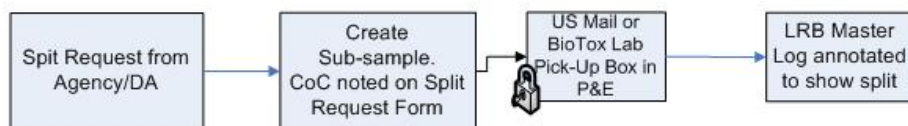
Paperwork destruction times are:

Analyst's Worksheets	3 years
Integrator Printouts	3 years
Master Log	Never destroyed
QCR Logs	3 years
Titration Logs	3 years
Mix and Low detection logs	3 years
Split Requests	3 years
Discovery Requests	3 years

Memos are written at the time of destruction and the destruction is approved by the Blood Alcohol Supervisor.



Blood Splits Process



SBCSD Blood Alcohol Unit Operations As-Is v5.vsd

Figure 14 Blood Alcohol Unit Operations

Breath Alcohol Section

The Breath Alcohol Section maintains, calibrates, maintains records, and provides troubleshooting assistance and courtroom testimony for over thirty Draeger Alcotest 7110MK-IIIC breath alcohol instruments located throughout the county. Agencies are responsible for the instruments being tested for accuracy every 10 days or 150 subjects' tests.

Each SBSD station or external agency with a breath alcohol instrument on site has an accuracy verifier (law enforcement or volunteer) who is trained and assigned to perform these periodic accuracy performance checks. SID personnel perform these checks on the four instruments located at two detention centers. The accuracy verifier uses a wet bath simulator partially filled with an approximately 0.15% alcohol solution heated to 34.0+/-0.2 °C to perform the accuracy check. The accuracy check consists of three sample readings taken by the instrument. A receipt is printed at the end of the test and attached to an Accuracy Checklist form. The completed Accuracy Checklist (also called Precautionary Checklist for the Periodic Determination of Accuracy for the National Draeger Alcotest 7110MK-IIIC) is faxed to SID and the original Accuracy Checklist is mailed to SID.

The breath alcohol section makes and determines the concentration of the accuracy check solutions. Once the accuracy check solution is provided to an agency it is good for two months or 10 accuracy checks. The solutions are logged out to each station on a paper log. The solutions are usually placed in the mailbox area in property for pickup by the agencies when they request it.

The breath alcohol analyst receives the faxed and original Accuracy Checklists from a mail tray in the front office area. The Accuracy Checklist is checked for accuracy, entered on the Periodic Determination of Reference Samples to Determine Their Concentrations log sheet, and the bottom area on the Accuracy Checklist marked for "For Lab Use Only" is completed. The faxed accuracy checklist is stored in a folder by instrument number. When the original Accuracy Checklist is received, the faxed Accuracy Checklist is removed from the folder. The original Accuracy Checklist is checked for accuracy and completeness, if a problem is found and can be fixed by the crime lab, it is corrected and initialed. If the problem cannot be corrected by the crime lab, a copy of the original Accuracy Checklist is kept and the original Accuracy Checklist is returned to the accuracy verifier for corrections. The corresponding faxed Accuracy Checklist is shredded and the original Accuracy Checklist is scanned as a .bmp file on the breath alcohol computer. The original Accuracy Checklist is placed into a three ring notebook by instrument number for the current year. If the original Accuracy Checklist is not received then the faxed Accuracy Checklist becomes the original, is scanned and placed into the notebook. The Accuracy Checklists are kept for three years after the last date the current instrument is used.

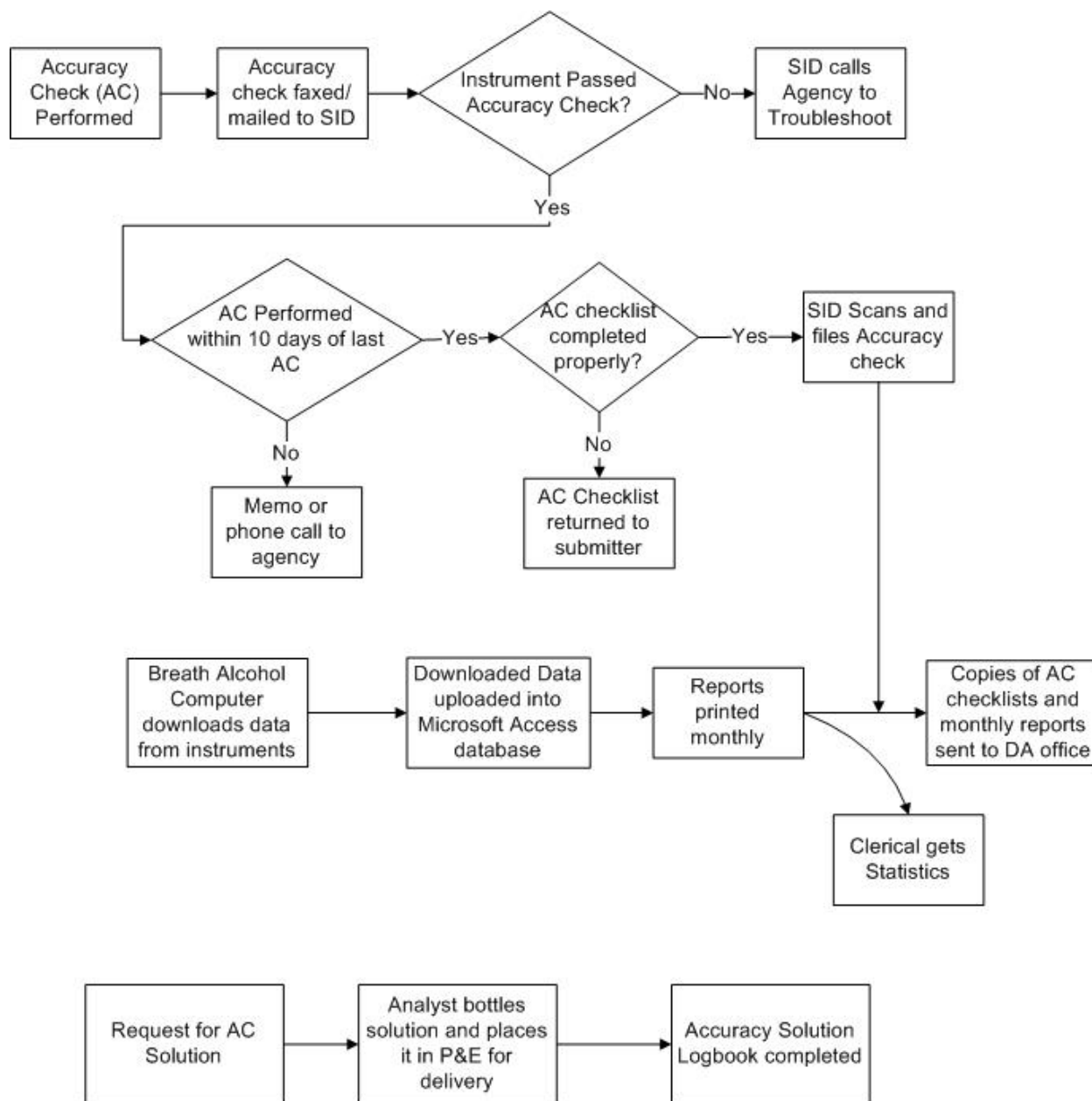
The breath alcohol section has a non-networked computer (can be networked) with a data retrieval program which automatically retrieves the subject's breath test and the accuracy checks from the Draeger breath alcohol instruments on a scheduled basis. The data is downloaded as an ASCII text delimited file which is uploaded into an Access database for ease in collating data and printing the end of the month reports. The end of the month reports include statistics, list of the periodic determination of accuracy checklists done on all instruments, a listing of subjects' test results and a list of subject's tests sorted by court number then instrument number. The printed monthly reports are printed and stored in notebooks and

filed by month. A copy of the statistics is sent to the clerical staff. The report showing the listing of subject's tests sorted by court number then instrument number are sorted by court and the corresponding instrument Accuracy Checklists copies are sent to the District Attorney's Office.

The breath alcohol section trains officers in the use of the breath alcohol instruments. Each year about 200 law enforcement personnel and volunteers are trained as operators and/or accuracy verifiers. A person must be an operator before training as an accuracy verifier. An Access database is used to track the training of the personnel. Records of training are maintained for each operator and accuracy verifier in a filing cabinet in the breath alcohol room.

The breath alcohol program issues non compliance courtesy memos for not having the accuracy check performed every 10 days or 150 subject's tests.

The breath alcohol unit responds to numerous discoveries (5+/week) throughout the year. The discoveries typically ask for maintenance and calibration of the instrument, the accuracy checklist, operators and accuracy verifier training, and procedure manuals among other items.



SBCSD Breath Alcohol Unit Operations As-Is v1.vsd

Figure 15 Breath Alcohol Operations

2.3.3 Forensic Biology Unit Operations

FB Supervisor receives GRF (general request form/"pink sheet") and reviews case folders to evaluate and prioritize assignments. Priority assignments are used to organize the work of DNA and other evidence processing on the basis of suitability for testing, court requirements and comments recorded during collection. Assignments are recorded in the case tracking system. FB may notify an agency that no work will be conducted on their submitted evidence based on suitability, that methodologies other than those requested are warranted, because something is missing (reference samples), or bases of the type of evidence and the case. FB assigns cases

through the case tracking system and tracks priority assignments through a computer spreadsheet. The GRF is sent to the analyst who contacts P&E for pickup. The analyst requests the evidence from P&E who stages it for pickup. The analyst picks up the evidence and this transfer is noted in PETS and on the ICOCS ("blue sheet") prepared by the analyst. The analyst stores the evidence in an appropriate storage locker or location depending on the type of evidence. .

There are four subsections of the FB unit: Stain preservation which examines evidence for stains and collects samples; Sex offense kits process which processes the sex offense kits and collects samples; Reference blood processing which processes blood from known persons and prepares swatch cards from their blood; and the DNA analysis which performs the actual known analysis.

Figure 16 depicts the process of selective priority work assignments by FB supervision.

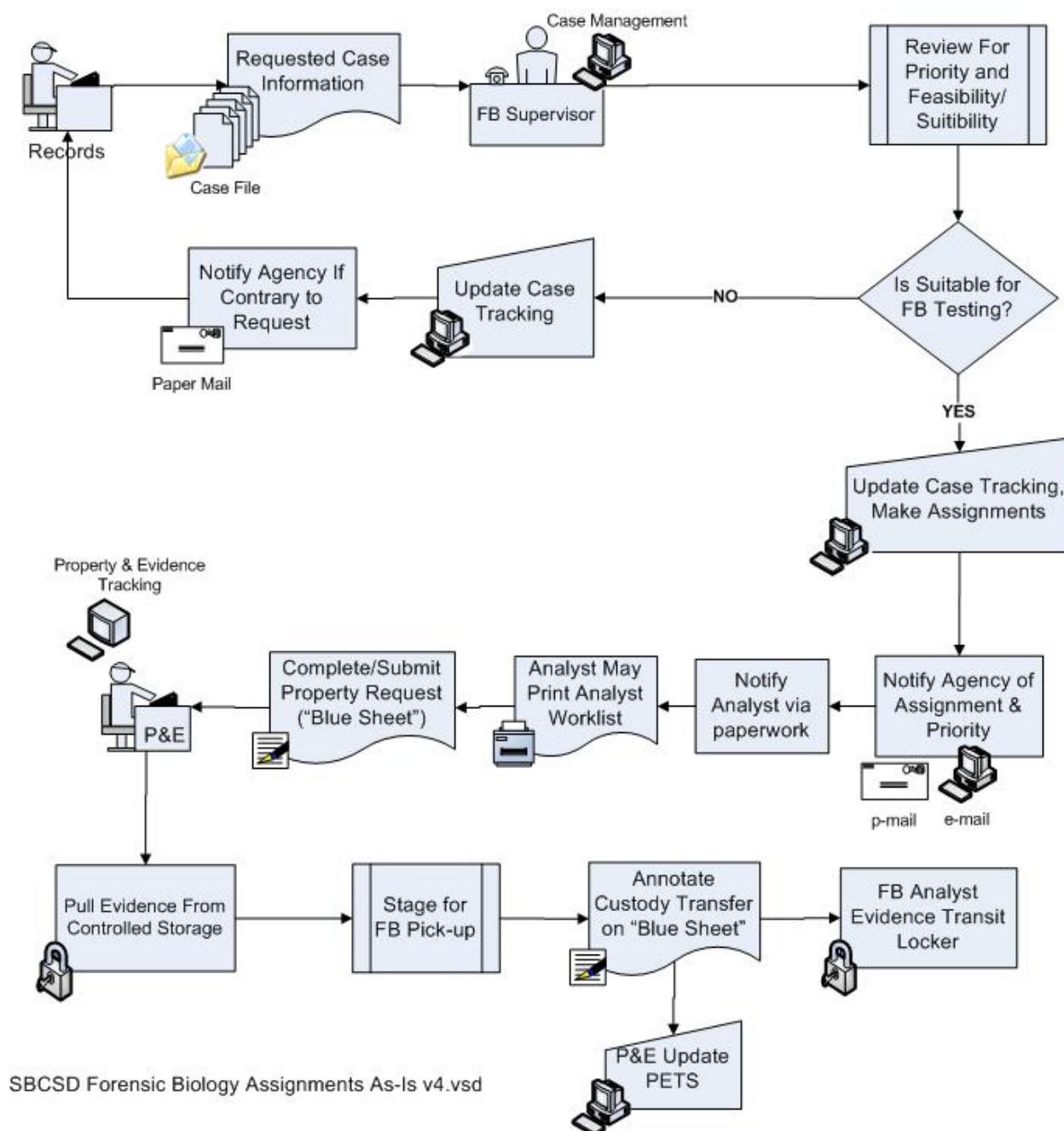


Figure 16 Forensic Biology Work Assignments

Stain Preservation

Stain preservation casework priority (shown in Figure 17) is assigned by the FB supervisor in the case tracking system by the employee's employee number. The analyst uses the GRF (general request form) and the LR for barcodes for items to be examined then completes an ICOCS (blue sheet). The analyst requests evidence from P&E through email.

Depending on the type of evidence, P&E pulls the evidence from its storage and places it in the appropriate temporary location for FB pickup and notes transfer in PETS. Analyst goes to P&E with ICOCS and receives evidence. This transfer to the analyst, not a location, is noted on the ICOCS (for all ICOCS transactions both the P&E personnel and the analyst must initial) and in PETS by P&E.

Analyst stores evidence as necessary either in the analyst's secured locker or FB frozen storage. The analyst performs a visual examination and, if necessary, presumptive screening tests are performed on this item. Notes are taken on all examinations.

Presumptively positive stained areas and negative controls are cut out or swabbed from the original (parent) item. These cutouts/swabs are collected, repackaged and given a new SBSD barcode; an ICOC, and CR3 are completed for this item.

The processed parent item is repackaged into its original packaging.

Some presumptively positive items are small enough so they don't need to be swabbed or cut but submitted in their entirety in their original packaging and barcode; otherwise if this presumptively positive item is one of many items, it may be removed from the original packaging and repackaged by itself with a new SBSD barcode, a ICOC, and a CR3 are generated. The case tracking system is updated if a new item number is created.

All items (original and collected) are returned to P&E with the appropriate forms. This return is recorded on the ICOCS and in PETS by P&E.

This original evidence is stored in controlled storage unless it tested presumptively positive; otherwise it is stored in frozen storage. The biological evidence is stored in the frozen storage and awaits analysis by DNA Analyst.

The analyst writes a report, submits it for peer and administrative review, and then it is sent to the submitting agency. The analyst notes the time spent processing, report writing and reviewing on the overview sheet in the case file. FB supervisor evaluates case and assigns it to DNA analyst with a priority level through the case tracking system. FB supervisor records statistics on the case tracking system, an Excel spreadsheet and a Cal-ID access database.

Sex Offense Kit Processing

Sexual Offense Kits (SOK) kits are prepared by the crime lab in P&E and are given to the SBSD agencies and PD for use. The kit is used in collecting samples which are submitted to P&E by the submitting agency as a SOK.

P&E receives SOKs from agencies and records this transfer in PETS (see Figure 18). P&E does a mass transfer of many SOK to FB when a sufficient number of SOKs has arrived. P&E updates PETS to transfer the SOK and its accompanying GRF to the locked FB refrigerator. The SOK goes into the refrigerator while the GRF goes in a file outside the refrigerator. This transfer is noted in the Transport Log located in a notebook outside the FB refrigerator door. Analyst retrieves SOK from refrigerator and opens SOK.

An inventory of the evidence in the SOK is written on processing form and items are processed as necessary:

1. Non-SOK items (clothing, tampons, condoms, etc), if included, are removed from the SOK, and given a new item number in the case tracking system.
The item(s) is/are placed into new packaging and given a new SBSB barcode.
A new GRF, CR3 and ICOCs are completed.
Analyst walks the new item evidence to P&E where evidence is transferred and recorded on the ICOCs and PETS by P&E. The evidence is stored in the appropriate location depending on the type of evidence it is.
2. The blood vial, if included, in the SOK is swatched onto a swatch card and allowed to dry. The swatch card is placed into a manila envelope with a label (prepared by FB analyst in MS Word) and is stored in the SOK.
The blood vial is packed into a Kapak envelope; a new SBSB barcode and label (prepared by FB analyst in MS Word) are placed on the plastic envelope.
The blood vial is placed into the FB refrigerator and the SOK transport log is annotated as to indicate the presence of the blood vial.
3. The SOK items (vaginal smears, rectal smear, and/or oral smears) are checked for the presence of sperm and observations are recorded.
All SOK items are returned to the SOK and placed into the FB freezer and the SOK transport log is completed. P&E picks up the vial and SOK, records the pickup in the transfer log.

The evidence is stored in the appropriate location depending on the type of evidence. A report is written covering the entire process (SOK items and non SOK items), submitted for peer and administrative review, and then it is sent to the submitting agency.

The analyst notes the time spent processing, report writing and reviewing on the overview sheet in the case file.

FB supervisor evaluates case and assigns it to DNA Analyst with a priority level through the case tracking system. FB supervisor records statistics on the case tracking system, an excel spreadsheet and a Cal-ID access database.

Reference Blood Processing

Reference bloods are not barcoded upon receipt. P&E processes the reference blood vials by barcoding with SBSB barcodes and assigning it a reference number (see Figure 19). Preprinted labels are placed on the vial, the white and pink copies of the General Request Form (GRF). The vial is placed into a kapak bag.

P&E transfers the reference blood vials and its accompanying GRF to the FB refrigerator. The reference blood vial goes into the refrigerator while the GRF goes in a file outside the refrigerator. This transfer is noted in PETS and in the FB Reference Blood Transport Log located in a notebook outside the FB refrigerator door.

Analyst retrieves reference blood vials from refrigerator and swatches the blood.

The blood vial is returned to the refrigerator in its original packaging and barcode. The swatch card, after drying, is placed into an envelope. The label (prepared by FB analyst in MS Word) and a new SBSD barcode is placed on the envelope. The envelope is placed into the freezer. P&E picks up the blood vial and swatch card envelope and notes this in the FB Reference Blood Transport Log and records this transfer in PETS.

A report is prepared by the analyst, submitted for peer and administrative review, and then it is sent to the submitting agency.

The analyst notes the time spent processing, report writing and reviewing on the overview sheet in the case file.

FB supervisor evaluates case and assigns it to DNA Analyst with a priority level through the case tracking system. FB supervisor records statistics on the case tracking system, an excel spreadsheet and a Cal-ID access database.

Additionally, the FB Stain & Preservation section performs maintenance and upkeep tasks of the unit, preparing solutions and reagents which are assigned lot numbers.

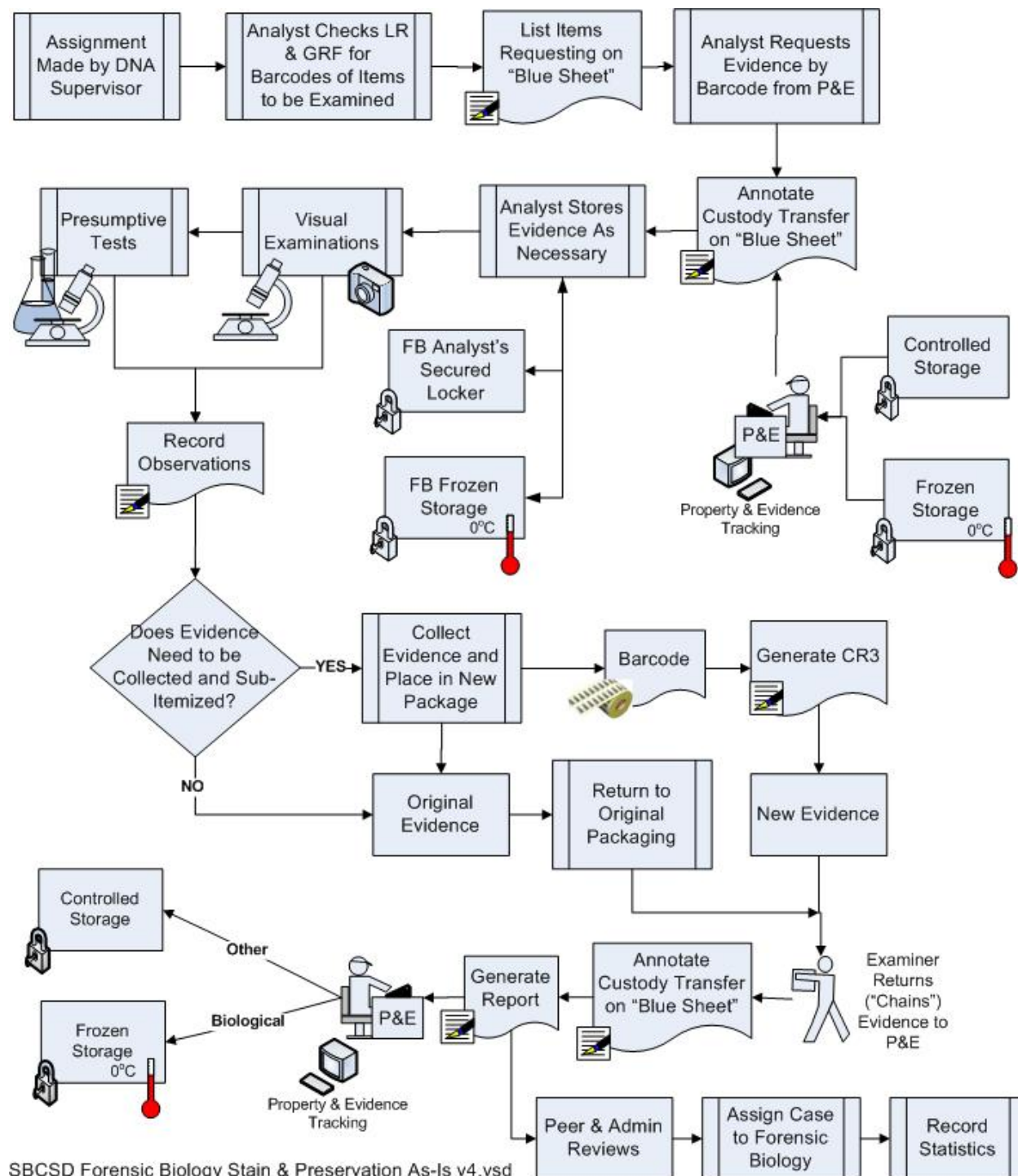


Figure 17 Stain & Preservation Operations

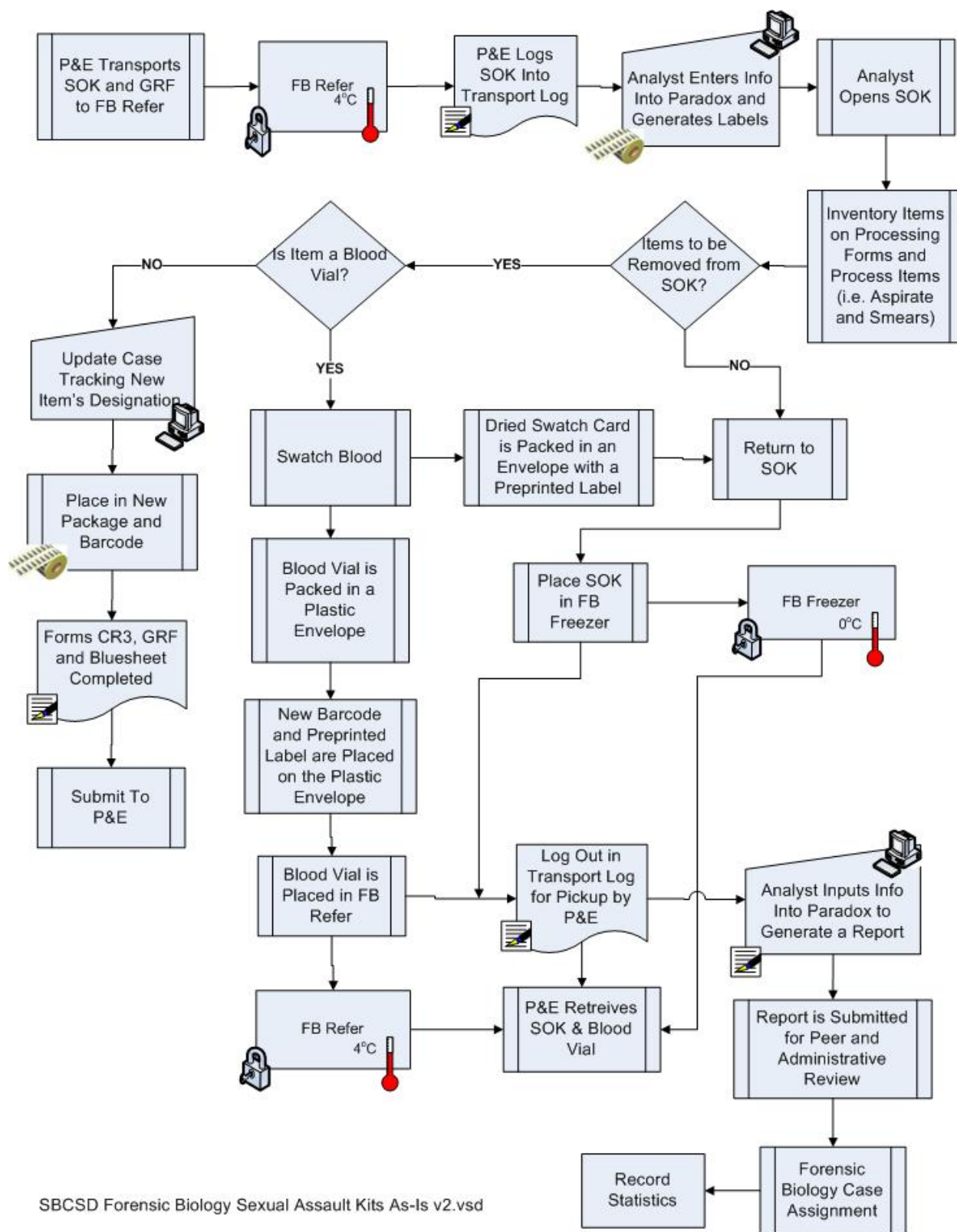
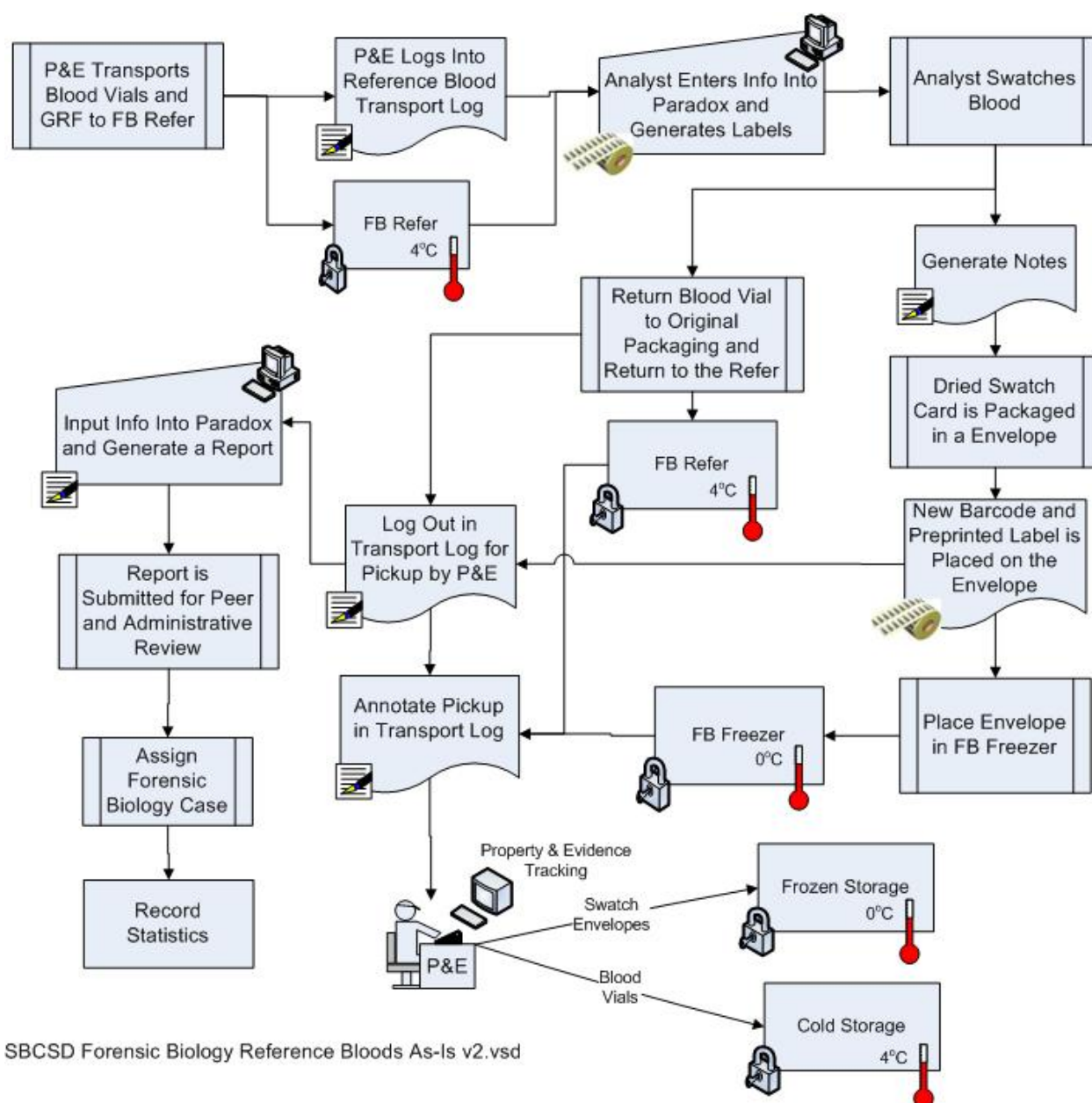


Figure 18 Sex Offense Kit Processing



SBCSD Forensic Biology Reference Bloods As-Is v2.vsd

Figure 19 Reference Blood Processing

The DNA analyst receives an assignment from the FB supervisor (see Figure 20) through the receipt of the GRF. The evidence may have already been to the stain and preservation unit of the FB section. The GRF is sent to the analyst who contacts P&E for pickup. The analyst requests the evidence from P&E who stages it for pickup. The analyst picks up the evidence and this transfer is noted in PETS and on the ICOCS ("blue sheet") prepared by the analyst. The analyst stores the evidence in an appropriate storage locker or location depending on the type of evidence. The evidence is visually examined and processed for DNA extraction, yield, quantification, amplification and STR-DNA analysis. Each item of evidence is given a unique identifier that is used in various logs throughout the analysis and is placed on each vial, tube, etc that this sample or its extract is placed. Traceability is maintained on lot numbers of

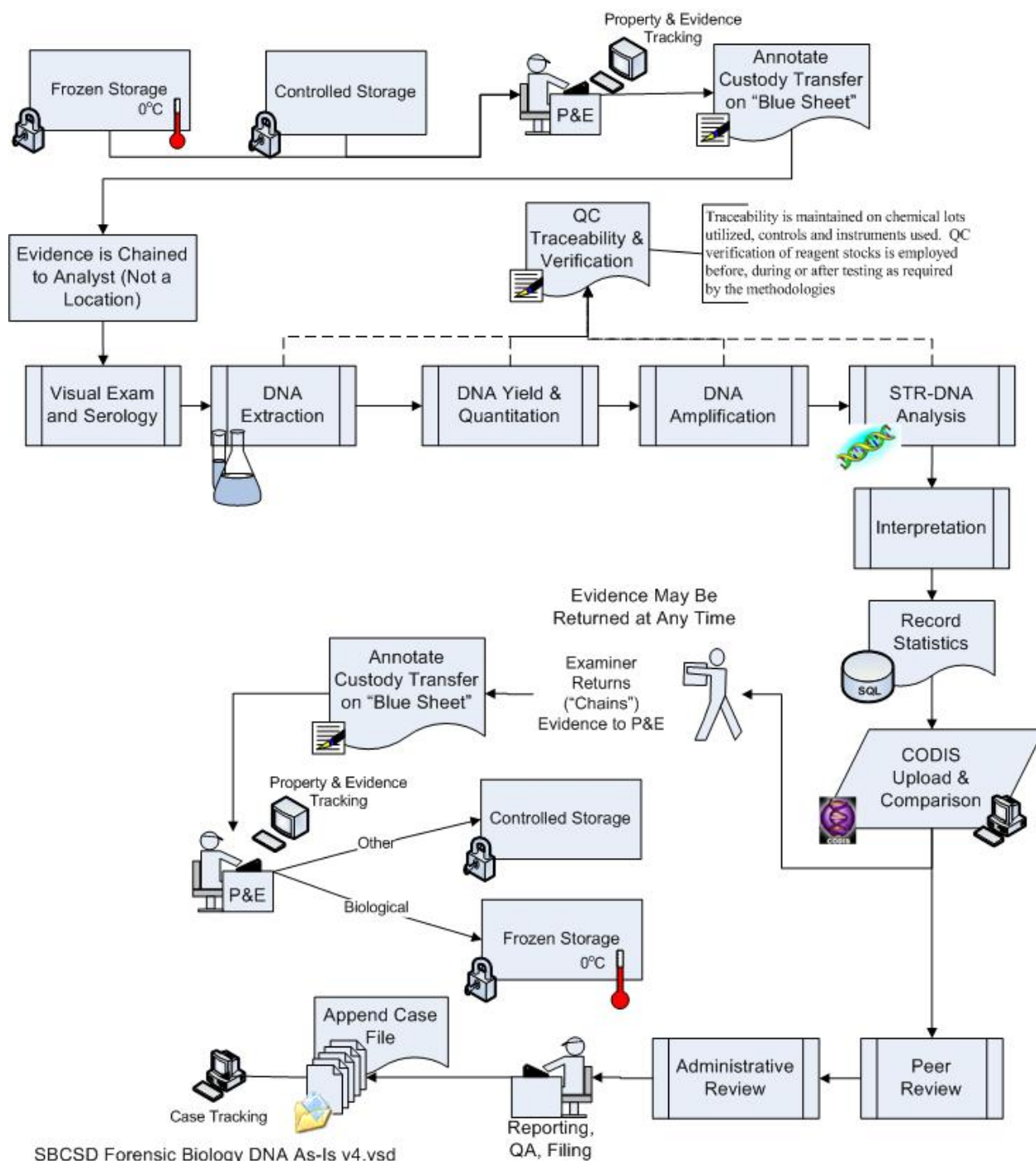
reagents and controls and identification of instruments used. QC verification of reagent stocks is employed before, during or after testing as required by the methodologies.

Genome data is submitted to the CODIS system for attempted matching and identification. (The CODIS computer cannot be networked.)

The report is written and submitted for technical and administrative reviews. The report is sent out to the submitting agency and filed in the LR 'green' folder.

It is not uncommon to perform tests, return the evidence to the submitting agency and have it again resubmitted when the case is re-opened, sometimes years after the first investigation.

FB maintains a MS SQL Server database for the collection of statistical data on the efforts/tasks expended during profiling and testing conducted.



2.3.4 Firearms & Tool Marks Unit Operations

Firearm and toolmark evidence, whether it is part of a larger case or submitted by itself follows the same evidence path as all other evidence in at SID. As shown in Figure 21 the submitting agency delivers the evidence to P&E, barcoded with a SBSD barcode, and with a GRF. The evidence is received at P&E, verified that it is safe (not noted anywhere), and the transfer is

recorded in PETS. The evidence is stored in the appropriate location in P&E awaiting analysis by the Firearms/Toolmarks Section. The GRF is forwarded to the Firearms/Toolmarks supervisor who prioritizes the case and assigns it to a Firearms/Toolmarks (F/T) analyst. The assignment is recorded in the case tracking system and the analyst is given a copy of the GRF to indicate the assignment. The analyst requests the evidence from P&E who stages it for pickup. The analyst picks up the evidence and this transfer is noted in PETS and on the ICOCS ("blue sheet") prepared by the analyst.

Evidence is typically processed through other SID sections prior to firearms testing. Approximately 15 Priority 1 cases, and 100 Priority 2 cases, are received monthly to the section. Priority assignments may be upgraded or downgraded; downgrades are typically due to pleas and are not usually communicated in an efficient manner as to avoid unnecessary work. Priority 3 cases are not analyzed.

As with other evidence the F/T analyst requests the evidence pickup by email or phone call and completes an ICOCS (blue sheet). P&E stages the evidence for pickup. The analyst goes to P&E and receives the evidence. The transfer is recorded on the ICOCS and in PETS. The evidence is stored in individual evidence lockers typically containing materials from multiple cases.

The testing process in F/T is analyst and case dependent. Two similar cases may not receive the same type of testing. This is dependent on the analyst and the ongoing results of the case. Recorded notes are open and free form narratives, often repetitive, on comparison worksheets. Worksheets used in examinations are associated with the type of evidence being tested and the tests conducted; forms vary from analyst to analyst and case to case. Photographs produced are printed and included with the notes in the case file. Digital images may be transferred to a CD and submitted to P&E.

The types of testing performed by firearms can include:

- Functional testing of weapons
- Test firing of evidence firearms
- Documentation of weapon condition
- Trigger pull weight testing
- IBIS (ATF Integrated Ballistics Identification System) entry of weapon data from weapon and from subsequent test firing. The system can search for related cases in most firearms examinations.
- GRC (General Rifling Characteristics) determination of bullets
- Bullet comparisons
- Fired cartridge case/shot shell comparisons (scene to scene/scene to gun)
- Distance determination (test firing plus microscopic examination and chemical testing)
- Chemical testing for elemental determination

Firearms rarely uses evidence ammunition for test firing, except when a firing distance test is required.

ATF's Integrated Ballistics Identification System (IBIS) can be searched for related cases in most firearms examinations. The results of the IBIS search and data entry is included at part of

the case file and a report is written regarding the positive or negative results of the IBIS search. Additional reports indicating a positive relationship between a past entry and a current entry will be written and sent to the submitting agencies.

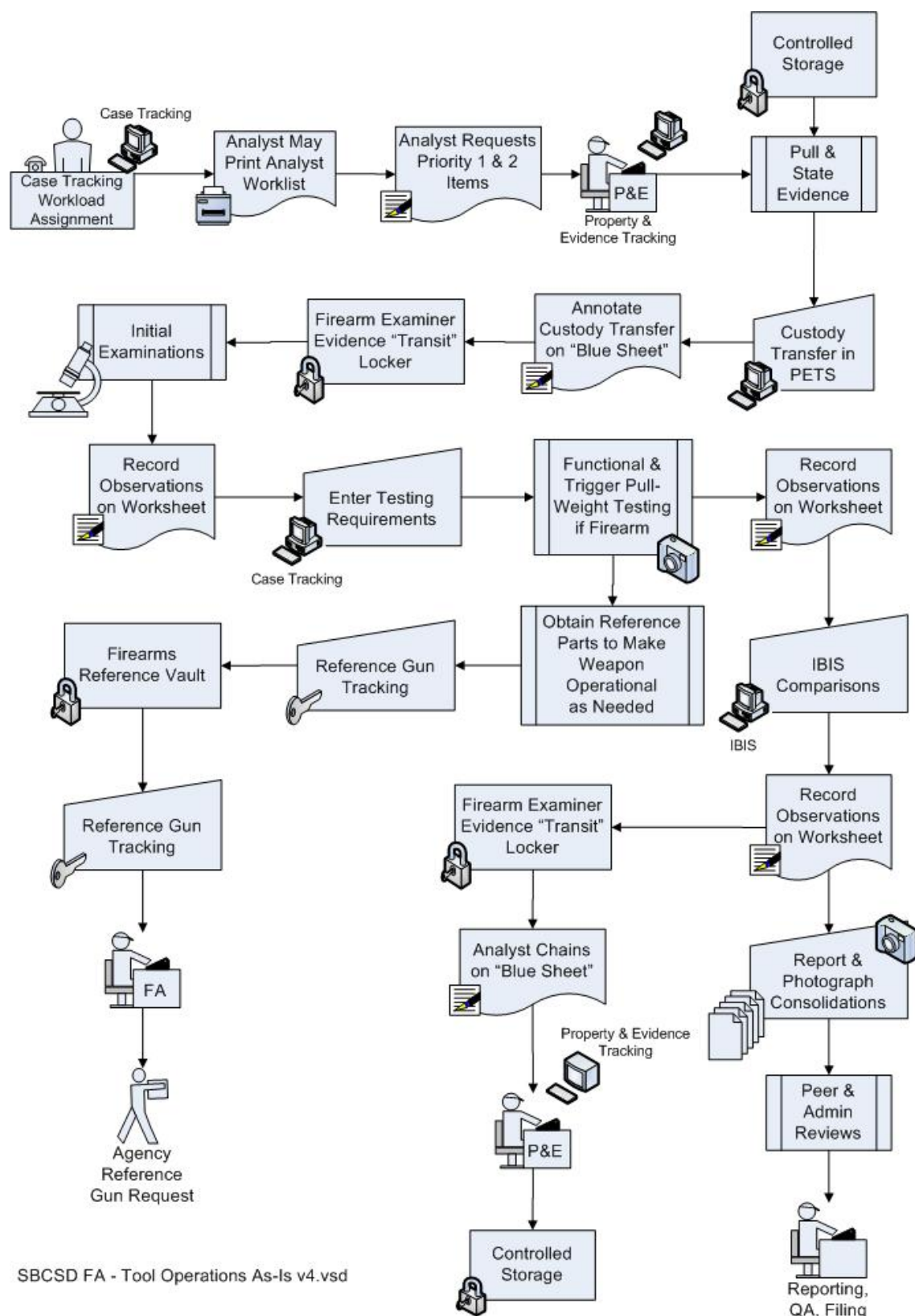
Tool mark examinations are typically freeform notes and no worksheet is used, photographic documentation is attached and included with the reports.

All positive identifications are verified by a second examiner. This is done by either direct examination or by review of photographs and is documented in the notes.

Reports are typed by clerical staff or the analyst, technically reviewed by another qualified analyst, reviewed and signed by the analyst, then an administrative review is done by another qualified examiner. The analyst and each reviewer records the time spent in either the analysis or the review on the Overview Sheet in the LR folder. Reports may be amended at a later date and supplemental reports are used for missed or added examinations. The Firearms Section Supervisor records the completion of the case in the case tracking system and records the times recorded in the Overview Sheet in the LR folder in the case tracking system.

Evidence is returned to P&E by the analyst. The ICOCS is updated to show this transfer and PETS is updated by P&E. The weapons and/or evidence are stored in its appropriate location. (See P&E section for disposal of weapons.)

Reference weapons in the Firearms Section may be used for parts to make weapons operable for test firing. The Firearms Section maintains a MS Access database for reference guns collection and performs an annual 100% Inventory Audit of Firearms Reference Storage Rooms. The Firearms Section can authorize and perform the transfer of reference guns to other agencies. Cases are often inter-connected, where the same weapon may be used in multiple incidents, by several suspects, or with numerous other weapons. The process of examination and the required observations and notes to tie such cases together is an arduous task.



SBCSD FA - Tool Operations As-Is v4.vsd

Figure 21 Firearms & Tool Marks Unit Operations

2.3.5 Trace Unit Operations

Trace evidence, whether it is part of a larger case or submitted by itself follows the same evidence path as all other evidence at SID. As shown in Figure 22 the submitting agency delivers the evidence to P&E, barcoded with a SBSD barcode, and with a GRF. The evidence is received at P&E and the transfer is recorded in PETS. The evidence is stored in the appropriate location in P&E awaiting analysis by the Trace Evidence Section. The GRF is forwarded to the Trace Evidence supervisor who prioritizes the case and assigns it to a Trace Evidence analyst. The assignment is recorded in the case tracking system and the analyst is given a copy of the GRF to indicate the assignment. The analyst requests the evidence from P&E who stages it for pickup. The analyst picks up the evidence and this transfer is noted in PETS and on the ICOCS ("blue sheet") prepared by the analyst. The evidence is stored by the analyst in the trace evidence locker room.

Subsampling of evidence is usually performed by another section (Stain Preservation in Forensic Biology) or the trace evidence is submitted as is. If subsampling is performed by a trace evidence analyst then the subsample is given a sub item number. The case tracking system is not updated as this is not a new item number only a sub item number.

The type of evidence examined by the trace evidence is varied and may include:

- Arson/Flammables
- Hairs
- Fibers
- Tire Impressions
- Shoe Impressions
- Paint
- Headlamp comparison
- Gunshot residue
- Other physical and chemical evidence found at a crime scene
- Explosives

Typically an initial examination of performed and the appropriate worksheet is started. Observations are noted and the remaining types of analysis are planned. These analytical methods may include:

- Color tests
- Solubility tests
- Thin layer chromatography
- GC/MS
- FTIR
- GC
- SEM/EDS
- Visual comparison
- Microscopic examination

The testing process in Trace Evidence is analyst and case dependent. Two similar cases may not receive the same type of testing. This is dependent on the analyst and the ongoing results

of the case. Recorded notes are open and free form narratives, often repetitive, on comparison worksheets. Worksheets used in examinations are associated with the type of evidence being tested and the tests conducted; forms vary from analyst to analyst and case to case. Photographs produced are printed and included with the notes in the case file. Depending on the analyst digital images may be transferred to a CD and submitted to P&E. The reports printed by the instrumentation are included in the LR folder, and are given a page number, date and analyst's initials. The instrumentation analysis does include the necessary quality control/assurance protocols.

Reports are typed by clerical staff or the analyst, technically reviewed by another analyst, reviewed and signed by the analyst, then an administrative review is done by the Trace Evidence Supervisor. The analyst and each reviewer records the time spent in either the analysis or the review on the Overview Sheet in the LR folder. Reports may be amended at a later date and supplemental reports are used for missed or added examinations. The Trace Evidence Supervisor records the completion of the case in the case tracking system and records the times recorded in the Overview Sheet in the LR folder in the case tracking system.

Evidence is returned to P&E by the analyst. The ICOCS is updated to show this transfer and PETS is updated by P&E. The evidence is stored in its appropriate location.

SBCSD Trace Unit Operations As-Is v0.3.vsd

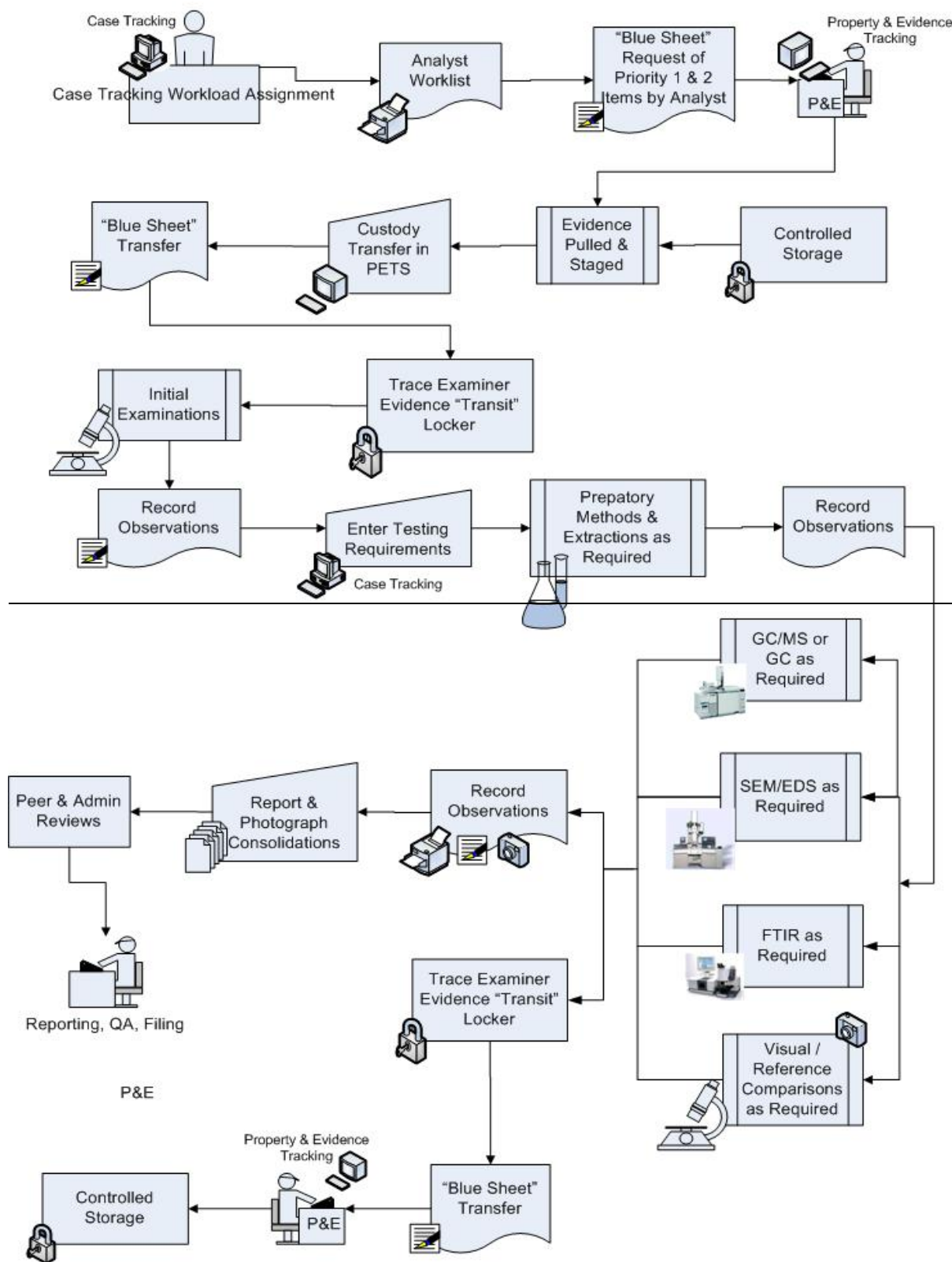


Figure 22 Trace Unit Operations

2.4 *SID Laboratory Quality Assurance*

SID Laboratory Quality Assurance Officer

The QA Section consists of one Quality Assurance Officer (QAO) and one assistant. Each of the units is accountable for their own quality assurance and quality control (QA/QC) functions where appropriate. The QA Officer does not normally get involved in daily workflow. The QAO answers to the SID Laboratory Director as the supervisor of QA operations and administration. The QAO is responsible for:

- Maintaining and updating the Quality Manual.
- Overseeing the maintenance and updating of Training Manuals and Procedures Manuals.
- Maintaining training files for all present and past employees
- Maintaining documentation of traceable certificates
- Overseeing and maintaining calibration checks of all designated equipment and materials
- Overseeing and maintaining documentation of Corrective Action Plans
- Overseeing and maintaining documentation of Courtroom Testimony Monitoring
- Monitoring and maintaining all internal and external Proficiency Testing
- Monitoring and maintaining the Education Binder
- Maintaining the Key Control System
- Accessing the report review system through the "Matrix System" and audits
- Ensuring new technical procedures are validated according to the Quality Manual – Validation of Test Procedures
- Implementing a Corrective Action Plan when quality issues are brought to the attention of the QAO by the Laboratory Director and/or Supervisor
- Scheduling periodic audits in accordance with ASCLD-LAB and SID requirements.
- Selecting, training and evaluating analysts/Supervisors to assist in internal audits
- Maintaining copies of ASCLD-LAB audits, DNA audits, Quality System audits, internal audits and responses to the audits
- Scheduling and coordinating Quality System Audits in accordance with ASCLD-LAB and SID requirements
- Recommending changes to continually improve the quality of the laboratory staff and work product, by reviewing the results of checks/audits
- Proposing additions/corrections/improvements to the Quality System using recommendations of the Quality System Audit, as well as additional information

The QAO uses MS Word, Access, Excel and paper forms to track the various duties of this office.

The laboratory is accredited through the American Society of Crime Lab Directors/Lab Accreditation Board. The QA office is responsible for (**maintaining?**) this status. Items are on the Inspection Matrix as they are either required by ASCLD/LAB, OSHA, or SBSCD, or are a part of another report that is required. This is done through a series of audits of each department which are done a yearly basis and through an Inspection Matrix which has a series of inspections/audits which are to be done throughout the year. The QAO is not responsible for doing all of these inspections except for those specifically assigned to him/her. The QAO

manages the items which are directly related to the quality assurance and the safety programs. The following is a listing of the items in the Inspection Matrix:

<u>Inspection Matrix Name</u>	<u>Assigned Person</u>
Monthly Vehicle Mileage and Service	Vehicle Maintenance Person
Quarterly Vehicle Maintenance Records Audit	Vehicle Maintenance Person
Monthly HT Set Audit	CSI Supervisor
Quarterly Property/Evidence Audit	Property Supervisor
Annual Property Audit of SID	Property Supervisor
Inspection of Personnel Lockers	CSI Supervisor
Semi-Annual Cleanliness and Maintenance Inspection	Clerical Supervisor
Semi-Annual Sting/K-9 Narcotics Audit	Narcotics Supervisor
Monthly Sting/K-9 Narcotics Returns	Narcotics Supervisor
Annual Firearm Reference Collection Audit	Firearms Supervisor
Annual Audit of SID Property for Department Use	Property Supervisor
Annual Audit of SID Narcotics (sting/K-9) for Department Use	Narcotics Supervisor
Annual Audit of Property Rooms at Stations/Divisions	Property Supervisor
Annual Division Goals Update	Forensic Biology Supervisor
Semi-Annual Station File Inspection	Administrative Secretary
Safety Training Documentation	Administrative Secretary
Annual Firearms Safety Training Scheduling	Firearms Supervisor
Semi-Annual Active Property Report	Property Supervisor
Monthly Work Performance Contract Evaluation/Progress	Administrative Secretary
On-Call Scheduling Notification	Administrative Secretary
Personnel Information Update	Clerical Supervisor
Monthly Statistics Report	Forensic Biology Supervisor
Annual External Calibrations	QAO
Annual Calibration of Pipettes	QAO
Performance Checks of Thermometers	QAO
Annual Calibration of Thermometers	QAO
Annual Audit of the Controlled Substances Primary, Secondary and Training Standards	Narcotics Supervisor
Annual Partial Audit of the Controlled Substances Primary, Secondary and Training Standards	Narcotics Supervisor
Annual Audit of the Controlled Substances Reagents and Logbook	Narcotics Supervisor
Annual Audit of the CSI Reagents and Logbook	CSI Supervisor
Quarterly Audit of the Forensic Alcohol System	Alcohol Supervisor
Annual Performance Checks of Armorer Weights	QAO
Quarterly Performance Checks of Balances, Instruments and Measuring Devices	QAO
Quarterly Audit of the Proficiency Testing Program and Courtroom Testimony Monitoring	QAO
Annual Update of Resume (CV)	QAO
Monthly Quality Audit of the Blood Alcohol System (Clerical)	Clerical Supervisor
Annual Quality System Audit	QAO
Annual DNA Audit	Forensic Biology Supervisor
Annual ASCLD/LAB Self-Inspection Report	QAO
Annual DNA Proficiency Test Requirement	QAO
Annual Key Audit	QAO
Annual Proficiency Test Order	QAO
Annual Manual Review	Forensic Biology Supervisor

Quarterly Evidence Audit	Narcotics Supervisor
Annual Update of Performance Standards	Clerical Supervisor
Monthly Quality Audit of the LRN Typing Log	Clerical Supervisor
State of the Unit Memo	Forensic Biology Supervisor
Monthly DNA Facilities, Equipment and Log Audit	Forensic Biology Supervisor
Quarterly Check of Critical Reagents and Commercially Purchased Reagents for Forensic DNA	Forensic Biology Supervisor
Quarterly Forensic Biology Equipment Maintenance and Log Audit	Forensic Biology Supervisor
Quarterly Forensic Biology Equipment Maintenance and Log Audit	Forensic Biology Supervisor
Annual Self-Inspection of the Narcotics Unit	QAO
Annual Self-Inspection of the Blood and Breath Alcohol Unit	QAO
Annual Self-Inspection of the Trace Unit	QAO
Annual Self-Inspection of the Firearms Unit	QAO
Annual Self-Inspection of the CSI Unit	QAO
Annual Self-Inspection of the Forensic Biology/DNA Unit	QAO
Quarterly Audit of the First Aid/Minor Injury Log	Safety Chair
Quarterly Facility Safety Inspection	Safety Chair
Monthly Facility Safety Inspection	Safety Chair
Annual Review of Bloodborn Pathogen Plan	Narcotics Supervisor
Annual Replacement of Smoke Detector Batteries	Safety Chair
Annual Replacement of Narcotics Portable Fume Hood Filters	Narcotics Supervisor
Annual Replacement of Trace Portable Fume Hood Filter	Trace Supervisor
Monthly Inspection of SCBA's	Narcotics Supervisor
Annual Inspection of APR's and SCBA Masks	Narcotics Supervisor
Annual Spill Control Refresher Training	Narcotics Supervisor
Annual Evacuation Drill	Safety Chair
Drug and Chemical Inventory Audit (even numbered years)	Narcotics Supervisor
Review and Audit of the Chemical Hygiene Plan	Safety Chair
Review of the Chemical Hygiene Plan	Narcotics Supervisor
Air Monitoring Refresher Training	Narcotics Supervisor
Monthly Inspection of Fire Extinguishers in County Vehicles	Vehicle Maintenance Person

The QAO uses MS Word, Access and Excel to coordinate and track the Inspection Matrix.

Corrective Action Plan (CAP) can be used to document failures to follow Division or ASCLD/LAB policy. In addition to corrective actions for failed proficiency tests, corrective actions are also triggered by other instances such as non-conformances and false identifications. The corrective action reports follow an SOP and follow a form.

The Laboratory Director determines the need to issue a CAP following awareness of issues requiring attention. CAPs are maintained indefinitely.

The QA Officer administers annual proficiency tests used to verify analyst/methodology competency. ASCLD/ LAB requires that each criminalist/examiner be tested at least one time per year in each discipline he/she is certified, except for DNA analysis which requires 2 QA tests annually. The QA section uses a MS Access database to track competency for approximately 40 criminalists/examiners. The database tracks proficiency test number, person assigned to, due date, status, target, type of test, and date of report. Some of the proficiency tests are provided by external entities. The laboratory only has to complete one result per discipline externally to satisfy requirements. Other proficiency tests are prepared and administered in-house. In-house proficiency tests can include blind testing, open testing and reanalysis of a case.

Laboratory Quality Assurance Program

Each operational unit will maintain written protocols (procedures) for the analyses and/or examinations performed. Such protocols describe:

- The use of appropriate positive and negative controls for tests
- The expected level of performance of these controls (if applicable)
- The use of pertinent standard materials (if applicable)
- Calibration procedures (if applicable)
- Precautions (if applicable)
- Possible sources of error (if applicable)
- Literature references (if applicable)
- Where the results are to be documented

Each operational unit's work product will be monitored for quality assurance by the unit supervisor.

- Case report and note review shall be done to ensure proper procedures are being utilized, appropriate results and conclusions are being reported, and complete notes and documentation are present.
- In warranted instances, the unit supervisor shall take immediate action to resolve errors and discrepancies through employee counseling, remedial training and demonstration of proficiency before normal casework resumes.
- The unit supervisor shall be responsible for the training of analysts to ensure that the approved training protocol has been completed with satisfactory results prior to the start of casework analysis.
- Whenever discrepancies arise between Division results and defense testing results that cannot be resolved, the unit supervisor shall submit the necessary evidence to an approved referee laboratory for independent analysis when sufficient sample remains.
- The unit supervisor shall measure the capability and understanding of analysts by providing open or blind sample testing opportunities (i.e. practical exercises, proficiency tests). Deficiencies in technique or understanding of theory and principles shall be corrected prior to unsupervised case analysis.
- Proficiency testing shall be used to measure analytical proficiency. Deficiencies in protocols or application of protocols shall be corrected prior to continued case analysis.

2.5 CAL-ID Analytical Operations

2.5.1 Latent Prints Unit Operations

Latent Prints Unit (LP) is a unit of CAL-ID. Prints are submitted to LP as either lifts or photographs, GRF (General Request Form – "Pink Sheets") are forwarded to LP and PETS by CAL-ID clerical staff. External PDs may submit prints to LP directly and LP Clerical staff may do the initial PETS entry. External agencies' and Sheriff's stations must submit latents directly to LP. Only latents generated by the staff at SID (CSI, Narcotics, and clandestine lab investigations) are submitted from P&E to LP.

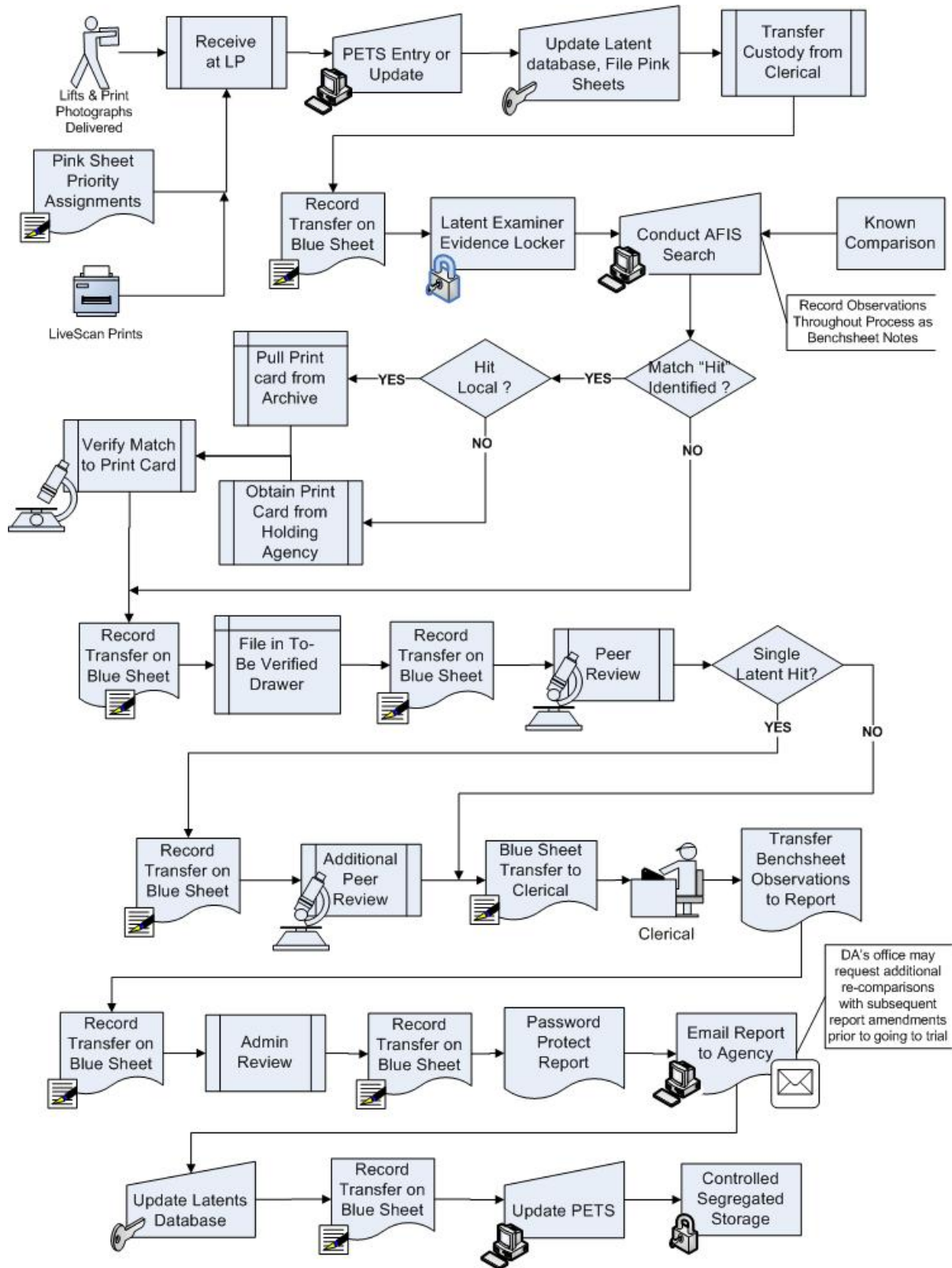
ICOCS (internal chain of custody sheets – “blue sheets”) are used to transfer evidence within LP but Priority Assignment Sheets are not used. Priority work is self-assigned giving attention to homicides, other persons crimes and then property only cases. Property crime cases are screened for quality before being assigned. The DA’s Office or any case agent may contact an LP supervisor to check on status or escalate the priority of a case.

When an envelope containing latent print evidence is received, the Clerical Staff ensures that a properly completed General Request Form (GRF) (pink sheet) is submitted as well. The accuracy of the description of the evidence listed on the GRF and envelope is compared to the evidence contained in the envelope **and**, each item is date stamped. PETS is updated to ‘active’ which reflects the receipt of the evidence from the submitting agency to CAL-ID. An Internal Chain of Custody Sheet (ICOCS - blue sheet) is generated by the clerical staff. This ICOCS is used to record the chain while the evidence is in CAL-ID. A record of the case is created in the local latent print database, a MS Access application used to record statistics on work performed and identification made by LP. The case is forwarded to the appropriate storage location prior to assignment. As examiners pull cases for processing, they complete an assignment slip with the date and their initials. The slips are forwarded to the Clerical Staff and the local latent database is updated with the information.

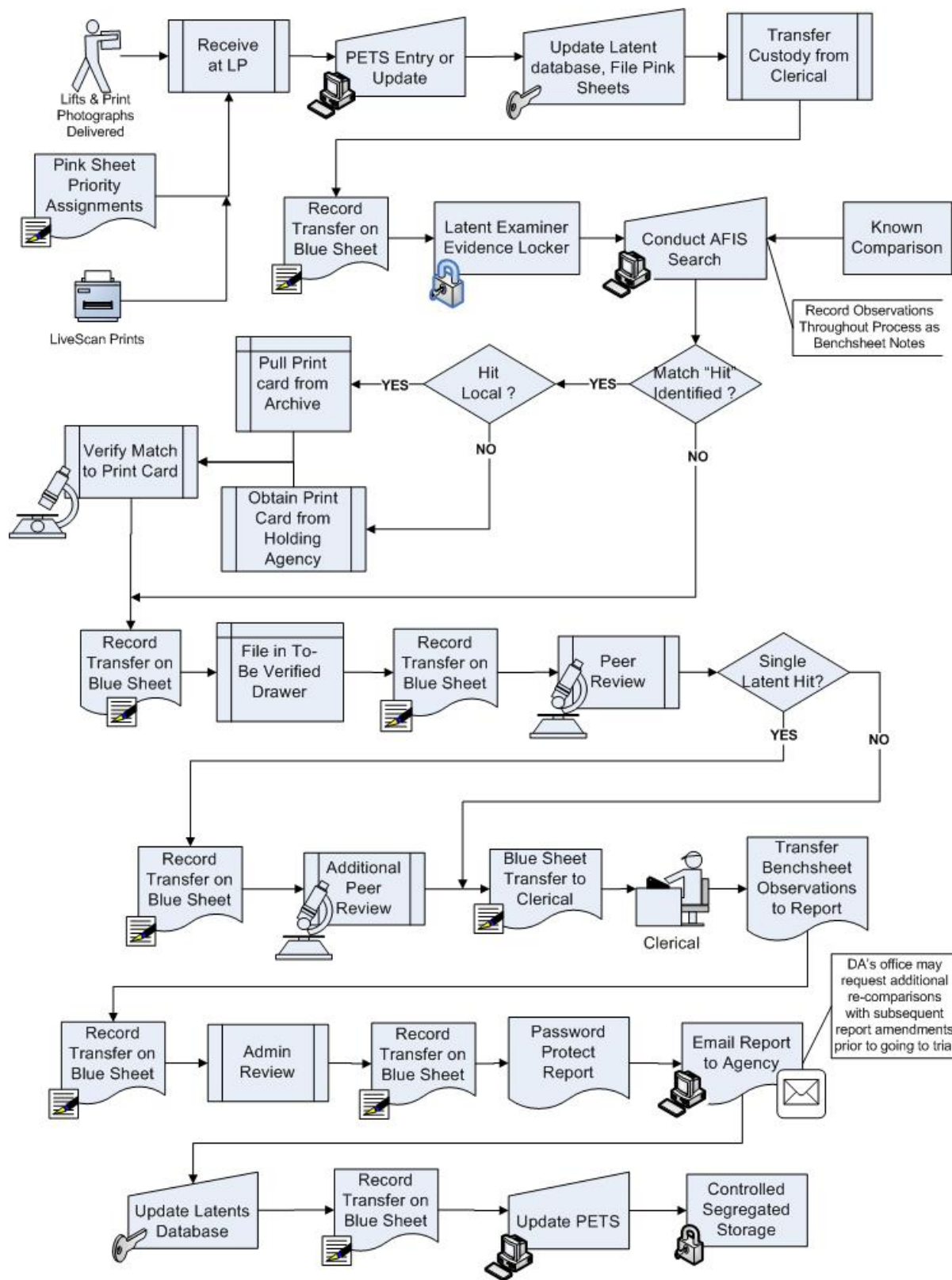
A “To Be Verified” drawer is maintained and not assigned to any individual Examiner. Examiners maintain their own evidence property lockers which are locked during their non-working hours. It is not uncommon to receive additional latent prints on a case as it progresses. Latent print comparisons are conducted by the Examiner with the aid of Automated Fingerprint Identification System (AFIS). Searches are conducted regionally first, then nationally if necessary. The AFIS system is shared with Riverside County. If an identification “hit” is made indicating the suspect is local, then the Examiner pulls the individual’s ten-print card and/or palm cards from archive files to complete the examination. 90% of suspects identified are local. If a “hit” is not local and cannot be obtained from the DOJ’s Automated Archive, LP requests a certified copy of the suspect’s ten-print card and or palm cards be mailed from the holding agency. All identifications are technically reviewed for verification and this review is recorded on the worksheet. Any suspect identified with just a single latent must be verified by a third reviewer. Some narrative based worksheets, typically a page or more, are used and transferred to word documents to complete the file. Narrative notes are excluded on the official report but remain in the case file.

An administrative review is conducted on the case file by the examiner. Clerical staff emails the password protected MS Word document report to the submitting agency. The DA’s office may request additional recomparisons with subsequent report amendments prior to a case going to trial. When a case report is completed, the Latent Prints Clerical Staff separates the barcode labeled latent prints cards received from the agency from the file and place the latent print cards in the secured storage area. The ICOCS and PETS are updated. The file is then forwarded to the appropriate storage area.

Current year, prior year, and latent evidence greater than 2 years are kept in segregated storage files by agency/year. Latent evidence is returned to the submitter after 5 years. A “Cold Case” work file is maintained and LP examiners will occasionally rework the case completely using any new technology available since the case was last worked



SBCSD LP Unit Operations As-Is v3.vsd



SBCSD LP Unit Operations As-Is v3.vsd

Figure 23 Latent Print Operations

2.5.2 Ten-Print Unit Operations

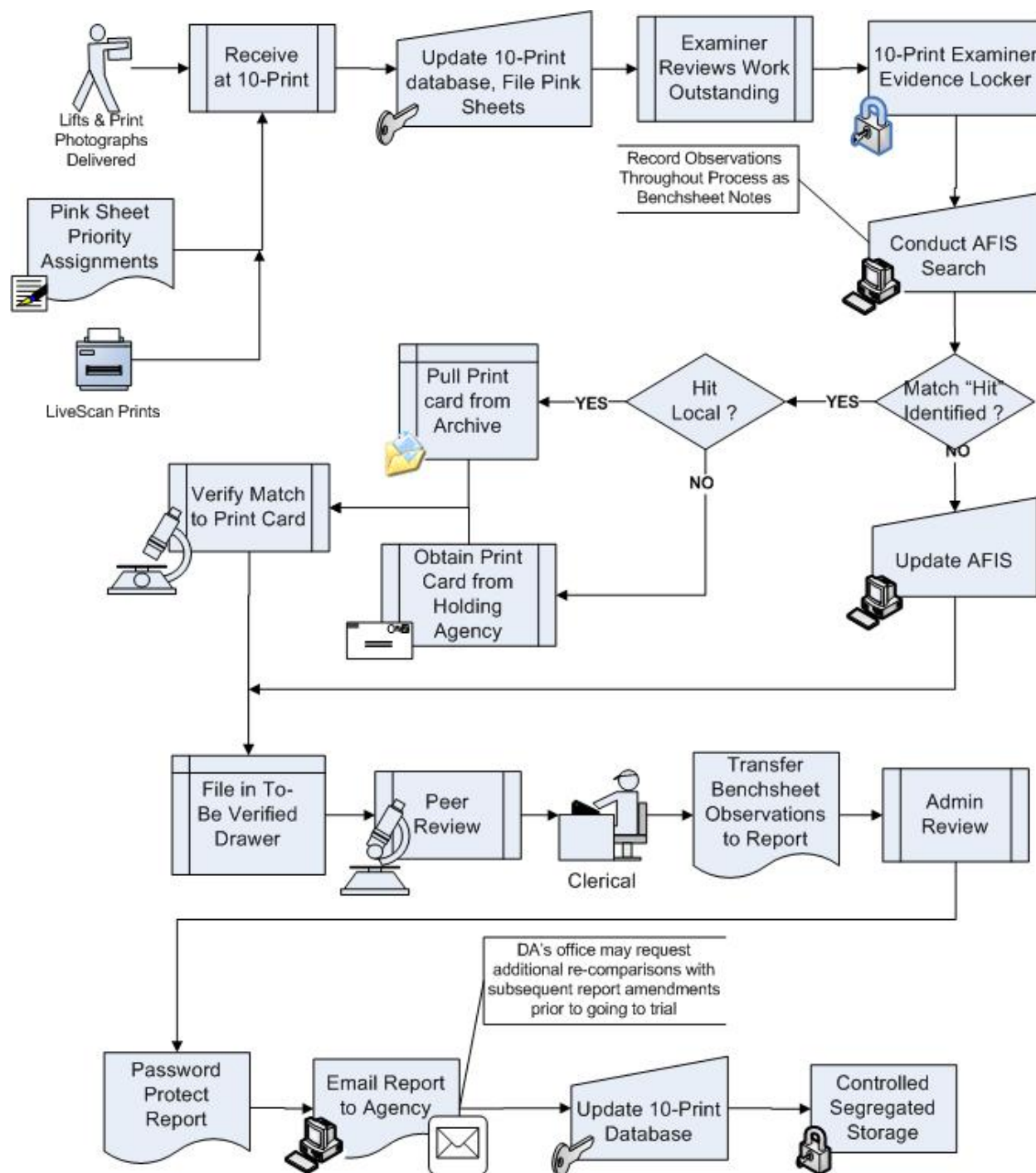
The Ten-Print (TP) Unit services SBSD as well as all other law enforcement agencies within the county. Agencies submit Ten-Print fingerprint cards for examination by the Ten-Print Staff. Examination consists of using local AFIS database and searching the submitting Ten-Print card against those cards already in the database. The majority of these cases are submitted electronically via Livescan. These records are processed in one of two ways: automated and manual for priority cases.

The automated workflow performs the following: each of these records (live scans/ten-print cards) are searched against the local AFIS database. In the event of a match, the record is forwarded to the appropriate folder (each folder is defined by the AFIS key number) in the automated document archive system (DAS). If no match is made, then an AFIS key number is assigned and the prints are registered in the database. A folder is then created in DAS to store the records under the assigned key number. All records are forwarded via network connection to the California Department of Justice (DoJ) and the Federal Bureau of Investigation (FBI) for searches against their databases. Responses are received from DoJ and the FBI electronically. The results of these multiple AFIS searches are used to update a subject's local criminal history in the Central Name Index (CNI).

A manual workflow is employed when an agency needs priority processing of a Livescan record. A Ten-Print Inquiry (TI) is submitted via fax for a specific Livescan record. Fingerprint Examiners manually conduct comparisons and the AFIS searches and prepare a formal report of their results. These results are then verified by a second Fingerprint Examiner as the technical review and upon completion, a notification is made via voice or fax to the submitting agency.

The completed case file is forwarded to the TP Clerical Staff for typing. The typed reports are returned to the original examiner for administrative review. The completed case files are then returned to the Clerical Staff to be forwarded to the appropriate storage area. The Clerical Staff maintains a MS Access database to trace TI cases. In cases involving tenprint cards only, the materials are considered business records and NOT evidence and are exempt from chain of custody documentation requirements.

TP is occasionally assigned rolled print cases that have been submitted to the Latent Prints section. These cases usually involve checks or pawn slips with rolled impressions. These cases are forwarded to TP from LP and an ICOCS is used to document the chain of custody. These types of cases were worked and documented as a TP case.



SBCSD Ten Print Unit Operations As-Is v3.vsd

Figure 24 Ten-Print Unit Operations

2.6 Administrative Operations

2.6.1 SID Clerical Unit Operations

2.6.2 CAL-ID Administration Unit Operations

This unit facilitates the administrative processing and metrics collection of the Ten-Print and Latent Print units and hosts the variety of automated services available for identifying individuals. Quantity of cases received, processed, identifications made, trends and quantity of transactions are a few of the performance indicators reported to the state.

Ten-print or latent prints reports are often transposed manually by the respective clerical Cal-ID unit to an MS Access application with an MS SQL backend to the purpose of performance indicator gathering as mentioned above. The CAL-ID system is statewide and provides law enforcement agencies with live scans of individuals as may be obtained during bookings, license registration and employment screenings.

Approximately 150K bookings occur in SBC annually, system inquiries may be conducted for warrants and arrest histories, and the system supports the collection of images/mug shots. Access to the California Automated Palm Print System (CAPS) is also maintained and utilized.

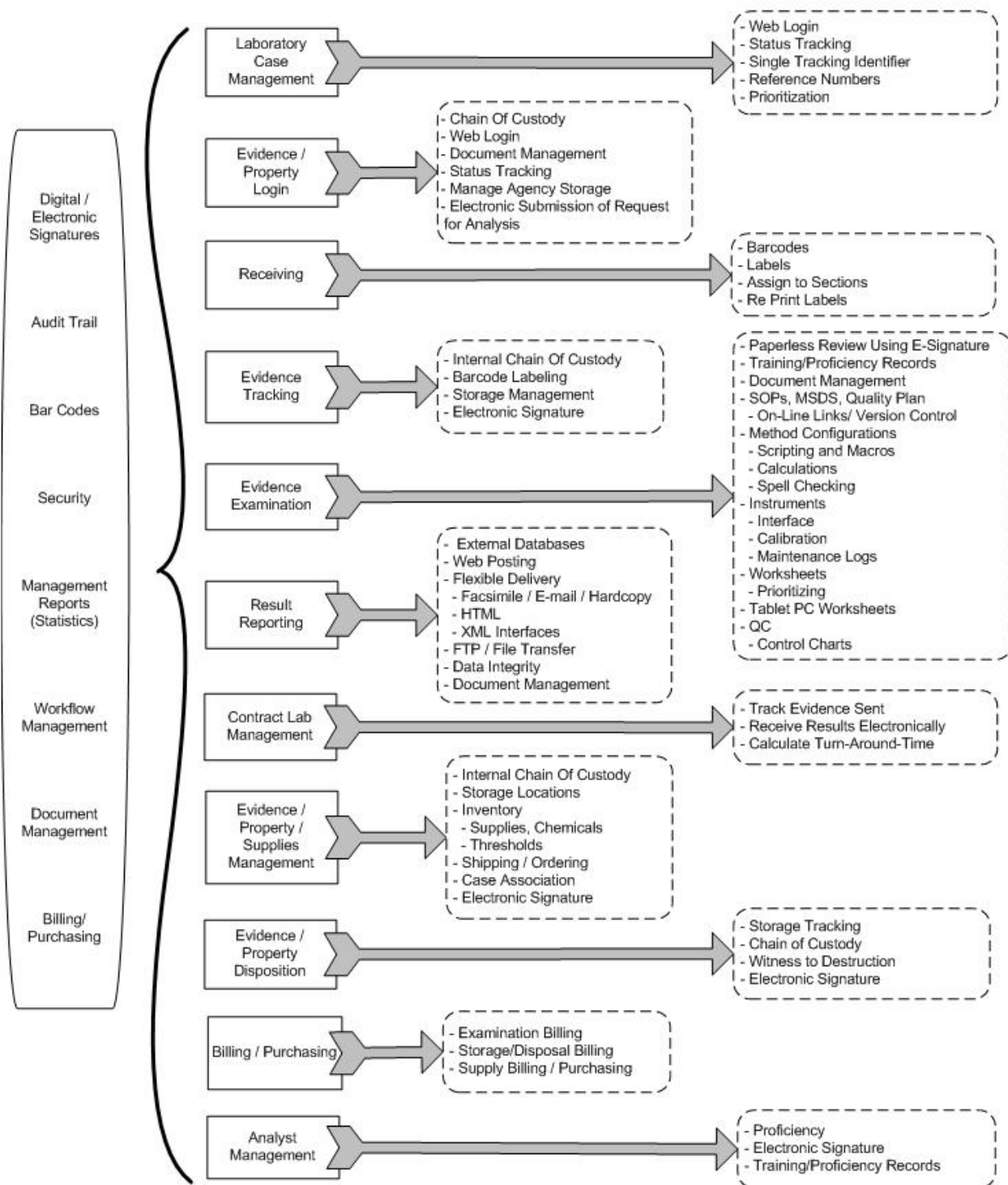
3. LIMS Required Functional and Operational Processes

This section identifies general goals that apply to the entire SBCSD LIMS, herein referred to as 'the LIMS'. In this section the term 'LIMS' includes any and all software, hardware and services delivered as a whole or as component parts of the proposed LIMS. Vendors shall propose complete solutions to each requirement and identify any functionality that is being provided by any software that is not part of the vendor's LIMS product. If specialized hardware is required to satisfy a requirement, the vendor shall identify the type of hardware required and identify one or more models of hardware the vendor has used to successfully provide the required functionality.

3.1 LIMS Functionality Overview

The LIMS shall provide functionality that can improve many SBCSD processes. The LIMS shall support the SBCSD in meeting the requirements of regulatory agencies with which SBCSD must comply, e.g., ASCLD/LAB, ISO17025. Some of the basic high-level functions the LIMS shall include are shown on the left-hand side of Figure 25. To the right of the basic functions area are a number of key SBCSD business processes coupled to a list of low-level LIMS functions and improvements.

Each of the key SBCSD business processes is described in the following sections.



Functionality Overview v4.vsd

Figure 25 LIMS Functionality Overview

3.1.1 Laboratory Case Management

The LIMS shall create an electronic case file to manage all work and information regarding submitted evidence. The laboratory case file shall be linked to the incident (complaint) number identified in the laboratory request. The LIMS shall be capable of recognizing multiple incident numbers for any laboratory case. When an item is received in the laboratory the LIMS shall search for and notify the evidence clerk if a laboratory case has previously been created related to the incident number. If there is an existing laboratory case, the LIMS shall add the evidence to the existing case. LIMS shall provide for the means to associate a case to one or more other cases and readily display such associations to the Examiner, Supervision and Customer. . The LIMS shall provide the means for an Examiner, Supervisor or Customer to see the progress of the items in the case.

3.1.2 Evidence and Property Management

The LIMS shall allow designated log-in personnel to manually create an electronic record for each evidence item received into SBCSD-SID and then enter evidence demographic information contained on the Submission Form into the System. If the information contained on the Submission Form is available electronically, the LIMS shall automatically upload the relevant information and create an electronic evidence record. The LIMS shall generate a unique alphanumeric identifier for each electronic evidence record created and shall allow SBCSD-SID to decide upon the format of the identifier.

In addition, the LIMS shall allow the creation of an electronic case file that groups one or more submissions of evidence either at the time of evidence receipt or at any time in the analysis or post-analysis cycle. This capability will be applicable, for example, for linking evidence where the relationship of several items may not become evident until several have been examined. The LIMS shall allow cases consisting of one or more submissions of evidence including evidence collected or delivered on multiple days. The electronic case file, at the minimum, shall be a means to associate all evidence submitted for an investigation under one unique identifier.

3.1.3 Internal Chain of Custody

Accurately monitoring the detailed movement and storage of evidence is critical to meeting ASCLD/LAB requirements. The LIMS shall track evidence using Internal Chain of Custody (ICOC) functionality able to withstand the scrutiny of the legal system and enable the laboratory to immediately locate ANY evidence or submitted item without exception, upon request, including detailed ICOC information.

The LIMS shall allow/require users to designate where an evidence item is stored. Where applicable, the LIMS shall make use of integrated bar code technology to record ICOC information such as which laboratory section and/or person is in possession of a specific item of evidence, the date/time and users involved in transfers, and where the evidence is located within a storage location.

The LIMS shall track all transfers of custody within the LIMS database and shall enforce one-to-one evidence transfers between personnel by requiring the entry of a user ID and/or password

of the party relinquishing the evidence, the ID numbers of evidence being transferred, and the user ID, and/or password of the party accepting the evidence.

The LIMS shall permit the transfer of evidence to a storage location when one-to-one transfers are not possible. In this instance, the LIMS shall allow the relinquishing party to pick a location as the receiving party. Alternately, the LIMS shall make use of the bar code technology to scan the item and a bar code representing the location it is being placed.

The LIMS shall also produce detailed ICOC history reports that contain the information described above.

3.1.4 Workload Management

The LIMS shall produce work-lists (both on-screen and printable) and individual priority assignment sheets. The LIMS shall display information concerning the evidence in the LIMS in order for laboratory personnel to schedule work. The LIMS shall be pre-configured to query the database by examination code/method, group of examination codes/methods, laboratory area, evidence type, submission/check-in number, case number, or incident number. The creator of a query shall be able to store the query for re-execution. The examiner shall be able to prioritize the workload by parameters such as remaining hold time, evidence collection date, special turnaround requests, priority, or by date received. The work lists shall be easily configurable depending on the laboratory's requirements. From the lists, Supervisors shall be able to assign examiners to specific cases or evidence. Examiners shall be able to select evidence to be examined and generate QC batch worksheets (electronic and hardcopy) if required. The LIMS shall provide the QC batch work lists on-screen, in printable form, or as an Electronic Data Deliverable (EDD) to be able to be uploaded to laboratory instrumentation.

LIMS shall permit a supervisor to modify requested examinations for the purpose of addressing a specific question. Such modifications/overrides shall be permission based and audit trailed. Modifications and overrides shall cause automatic notification to the appropriate supervision that a modification has occurred.

The LIMS shall generate lists of all pending work according to the age of evidence, submitter, priority, charges, classification (e.g., repeat versus first-run), or turnaround requested, and allow the examiner and laboratory management to differentiate among these categories. The on-screen display shall include a user-controlled filter to help define the format of the criteria of the listed evidence. The LIMS shall be able to calculate remaining time in hours based on business rules, e.g., meeting the requirements of state penal codes for courts that are in session or closed at different times. Flags for calculated remaining hours and/or days of short suspense times shall be available on all work-lists and the LIMS shall actively/automatically notify designated personnel when a specified threshold is reached.

The LIMS shall allow an authorized user to cancel all pending or partial examinations for a case such as when a case is adjudicated. When such changes are entered into the LIMS, the LIMS shall notify all analysts/examiners assigned to the case of the change either through a notification/alert system within the LIMS or as an e-mail message sent by the LIMS via the SBCSD e-mail system.

3.1.5 Digital / Electronic Signatures

Digital signature and electronic signature are separate capabilities that can be used in combination to achieve greater efficiencies.

3.1.5.1 *Electronic Signature*

Electronic signature is the ability to authenticate a user that is taking a critical action in the LIMS. In a common approach to electronic signature, the user is requested to input their password to verify who is currently using the computer to perform the critical action. The LIMS stores the user identification and date and time of the authentication as part of the transaction.

The LIMS administrator shall be able to select and implement which processes require electronic signature. When electronic signature is implemented, the LIMS shall require re-entry of the current user password to authenticate the user. The LIMS shall store the date, time, and identification of the authenticated user as part of the transaction.

3.1.5.2 *Digital Storage of Signatures*

Digital signature is the ability to store a digitized representation of a LIMS user's signature and apply that signature when reports are generated in electronic format. This feature enables paperless reporting by eliminating the requirement to produce printed reports for the sole purpose of being manually signed.

The LIMS shall accept and store a digitized representation of the signature and the electronic equivalent of the individual's handwritten initials of every user within SID. Signatures and the electronic equivalent of the individual's handwritten initials may be stored in a binary form that is not searchable and will not be used for authentication. The LIMS shall be capable of applying a stored signature to any report based upon the identity of the individual approving the report after the appropriate authentication of the approving person.

3.1.6 Audit Trail

In conformance with the ASCLD/LAB, ISO 17025, GALP, and other quality guidance, the LIMS shall maintain audit trails of all activities pertaining to examiners, evidence identifiers and results. The LIMS shall track who entered information and/or report author and the date and time the event happened. The LIMS shall provide functionality such that a transaction log will record every transaction taking place on the LIMS. The transaction log shall be accessible only to authorized users. The transaction log shall not be editable. A "pop-up" box requesting reasons for changes shall be available but configurable as to whether it is mandatory.

3.1.7 Bar Codes

The LIMS shall print labels and worksheets with bar code representation of case/submission numbers and evidence numbers. Bar code labels will be used to label various documents and folders as well as evidence containers, standards, reagents, and laboratory equipment. The LIMS shall allow for inexpensive scanners to read the bar codes. Bar code scanners connected to instruments shall be used to populate run lists rapidly without the risk of transcription errors. Bar codes scanners connected to LIMS PCs shall enter evidence identifiers into the LIMS application to search for evidence and process chain of custody transactions. Bar codes affixed

to storage location shelves shall be scanned to identify evidence storage areas in the LIMS. Freezer and storage room inventories may use data loggers or other storage devices that shall upload tracked information on locations and tracked items to the LIMS. Labels with bar codes shall be produced automatically, or *ad hoc*, on demand by the end user, e.g., the capability shall exist to configure the number of labels needed in each receiving/check-in area. The capability shall exist to allow the printing of sequence numbers on labels to accommodate successive treatment or testing of the evidence.

Within the context of inventories of reagents and chemicals, etc., the bar code shall be a representation of the item lot ID. In some circumstances, inventory shall be uniquely labeled by individual container. LIMS shall provide for the ability to designate inventories as separate and distinct from collections, e.g. Library Books, Reagent, Reference Weapons and the like.

3.1.7.1 Bar Code Label Printing

The LIMS shall generate bar code labels of various sizes, selectable by the user, with mixed text and bar codes, for use in evidence and batch identification and any other areas where bar code labels will enhance user productivity. Use of bar codes shall encompass all aspects of COC and audit trail, both internal and external to the laboratory.

The LIMS shall print bar code labels to dedicated printers based upon the log-in location of the user. Typically the designated printer will be the closest to the physical location of the user. SBCSD-SID LIMS administrators will maintain the cross-reference table of bar code printer locations and user locations.

3.1.8 Security

Security, from the common point of view, prevents unauthorized persons from accessing sections or all of the LIMS application and ensures LIMS information is not compromised. However, security also ensures users have access only to the portions of the LIMS required for their job function.

The LIMS shall provide for the capability to restrict users to specific screens, as well as provide for automatic time outs. The LIMS shall allow these functions to be configured by SBCSD-SID on a per user and per screen basis in addition to role based permissions.

The LIMS shall manage secure access to completed examination reports by authorized persons. The LIMS shall allow read-only access to appropriately identified personnel from external agencies to only reports for evidence submitted by that agency. The LIMS shall allow read-only access to appropriately identified DA personnel to only reports for the geographic region assigned to that DA.

The LIMS shall also be able to enforce routine change of password after a LIMS administrator-defined number of days, basic definition of "valid passwords" rules, and locking of user access after a LIMS administrator-defined number of failed log-ins. The LIMS shall record all failed login attempts including the user account (whether valid or not), date, time, and IP address and/or MAC address of the user PC.

3.1.9 Workflow Management

The LIMS shall track the status of submissions from submission through reporting (and beyond when additional analysis or linking to future submissions is necessary). The LIMS shall track complete submissions, individual evidence, preparation (where required), associated Quality Assurance (QA) activities and examinations. The LIMS shall accept log-in information to identify specific Laboratory Sections and Units that will analyze each evidence item. The LIMS shall generate complete Turn-Around-Time (TAT) reports for submissions, evidence, and examinations averaging available tracking data. Measurements of TAT shall provide an option to not include weekends and holidays. The LIMS shall include a query to identify the status of a specific evidence item in the scheduled work flow.

The LIMS shall assign case, evidence, and analysis status values when evidence is received, logged and processed by the lab, similar to but not limited to the following:

- Received
- In Testing
- Examination Performed
- Ready for Validation and/or Approval
- Result Validated and/or Approved
- Evidence Complete
- Draft Report Written
- Technical Review Complete
- Administrative Review Complete
- Case Complete
- Reported (regardless of the reporting method)
 - Final Report Sent
 - Supplemental Report Sent
 - Revised Report Sent
- Evidence Archived
- Evidence Returned, Destroyed, Sold

The LIMS shall allow the user to change the status of evidence or the system shall automatically change the status when a task is completed.

Whenever workflow management is being used within the context of tracking multiple steps within a particular section and/or groups of examinations, the LIMS shall allow the user to change the status of evidence or examination step, as appropriate.

The LIMS user interface shall use workload/workflow status to drive "to-do" lists for individuals and/or groups participating in the workflow. The LIMS shall provide a communications interface between users, designated individually or by groups, which acknowledges receipt date and time of communication to the original sender and such messaging shall be retained as historical information applicable to the entity record of concern.

3.1.10 Evidence Disposition

The LIMS shall provide an easy way to determine if all requested examinations have been completed so that the evidence can be assigned a disposition date. The LIMS shall assign a disposition date based on the type of evidence, the examinations performed, and/or the results of the examinations. Authorized LIMS users shall have the capability to edit or extend the disposition date with a full audit trail. The LIMS shall also generate a disposition list based on any defined parameter such as hold time, submitter/project, evidence completion status, etc.

The LIMS shall enable SBCSD-SID to create shipping lists/COC for items being shipped to other locations outside the control of SBCSD. Minimally, the lists should include a uniquely identified manifest, the individual items in the package, the recipient and the date shipped.

SBCSD-SID retains many evidence items for long periods. Some items are used as positive controls or for training while others may be used as research material. For evidence that is retained, LIMS shall identify the storage location and all analytical results performed on that item. Examiners and evidence clerks shall be able to search the LIMS for archived evidence that meet specific criteria to identify the storage location. For items not marked in the LIMS for long-term retention the LIMS shall flag items that have been stored in excess of a time period that is settable by authorized SBCSD-SID personnel.

3.1.11 Management Reports and Statistics

The LIMS shall generate multiple standard or *ad hoc* management reports including performance statistics. These shall be able to be generated and optionally printed at any time. The system shall be flexible to allow reports to be generated based upon user-defined filter/sort criteria.

The LIMS shall be able to:

- Associate each examination performed by an externally assigned code number and by a unique examination identifier
- Associate each provider of evidence by a code number and a unique provider identification number
- Generate reports based on user-defined criteria and timelines

As a minimum, the LIMS shall support output to MS Word, Excel, Access, SQL Server, Adobe Acrobat, and Crystal Reports as programs for report generation. The LIMS shall also support output in XML format for reporting.

The LIMS Vendor shall pre-configure a minimum of ten (10) management reports standard to most laboratory environments. These reports need not be customized to the client's specifications but should conform to the LIMS Vendor standard configuration of reports. Trained SBCSD-SID users shall be able to modify any of the pre-configured management reports. Examples of management reports to be considered are:

- Work/evidence backlog filterable by Laboratory Unit, Laboratory Section, or examiner prioritized by due date
- Total work/evidence backlog listed for entire laboratory
- Lists of all Standards and Inventory filterable by Laboratory Section, storage location, expiration, etc.
- TAT for each part of analysis
- Evidence Disposition Lists
- Statistical counts of evidence (workload) filterable by, for example, designated time frames (month, quarter, year, etc.); geographic location and submitting agency.
- Status of Interfaces
- Other reports listed under "Maintenance and Calibration Tracking"

The LIMS shall provide the means of designing multiple report formats to meet laboratory requirements. Authorized, trained users shall be able to create their own reports from pre-existing formats that have been established as routine.

The LIMS shall include an integrated report writer to enable customizable reports to be generated by the SBCSD-SID without programming. If the LIMS uses Crystal Reports, or a similar product, to generate reports, then there shall be a toolbox to enable its application without requiring back-end access or programming. The vendor shall also ensure that SBCSD-SID receives the training required to create new integrated reports.

The LIMS shall provide query capabilities for the database and input information such as submitter, examination method, case, external complaint or other agency reference), date range(s), Laboratory Section or Unit, evidence identifier range(s), and QC data, in a totally configurable format.

The LIMS shall have the ability to automatically generate routine reports on a scheduled basis. Authorized SBCSD-SID users shall be able to designate the number and destination of the reports that are to be printed, e-mailed, posted to website, or faxed. The LIMS shall have the capability of sorting and grouping reports by at least submitter and case. The LIMS shall also have the ability to automatically generate and send a report when a triggered event occurs in the LIMS.

The LIMS shall provide reprint capability of any report while maintaining and reporting original print date and case and evidence demographics. If reports are saved in Portable Data Format (PDF), then the system shall not allow changes to these documents outside the system.

3.2 Document/Records Management

The LIMS shall provide Document Management Services (DMS) through its own Document/Records Management Function or an integrated third-party application. All LIMS users, by default, shall view the most recent "released version" of a DMS-controlled document by clicking a button or other control on the user interface.

The DMS component of the LIMS shall accept and manage documents such as Quality Manuals (QM), Standard Operating Procedures (SOPs), examination methods, worksheet templates, form templates, Material Safety Data Sheets (MSDS), Reagent Data Sheets, and Personal Protective Equipment (PPE) requirements. These documents shall be managed as “living” documents that shall be easily modified and expanded while maintaining a strict version control of every/any change, additions, deletions, etc., to include the dates, times, and details of anyone that modifies (including adding or deleting) any document within the LIMS DMS. All documents, whether static or under revision, shall remain accessible, i.e., readily retrievable, via search. The LIMS DMS shall capture both the content and identifying attributes of each document.

The LIMS DMS shall securely store all versions of document files. When a new version of a document is created the LIMS DMS shall maintain the new document in a draft status. During the development and approval period, the last released version shall continue to be the currently accessible version. When the draft document is approved, an authorized LIMS user shall release the new document via the DMS. The LIMS shall ensure the previous versions of the document are stored securely but available only to authorized LIMS users.

The LIMS shall track specific versions of an examination method in effect at the time evidence is examined. Examinations shall remain referenced to the SOP version under which they are performed.

Regardless of how Document Management is provided, documents such as MSDS shall be accessible from inventory screens and LIMS input screens related to procedures that use that particular MSDS. The LIMS shall provide this link whether the MSDS are provided through an electronic subscription service, via a web interface, or as scanned documents. SOPs shall be accessible from LIMS input screens related to the standard procedure.

The DMS function shall also manage electronic record files including reports, data files – including images – created by instruments, worksheets, scanned images of paper worksheets, submission forms, and graphical instrument output. Records related to specific submissions shall be accessible from LIMS screens related to the submission. Records related to specific evidence or examinations shall be accessible from LIMS screens related to the evidence or examination. The LIMS shall accept an image file from a paper scanner in a LIMS specified format containing a single bar code label containing the submission/check-in number within the image and automatically associate the electronic file with the submission/evidence log-in. The LIMS shall also accept a digitally uploaded image file in a LIMS specified format and automatically associate the electronic file with the submission/evidence log-in.

The DMS shall enable users to track the status of recurring reports to include, but not be limited to, information such as: the date each report was prepared, the dates it was submitted for signature, the date it was processed, resolution required, “action” dates, etc.

The LIMS shall provide hyperlinks to electronic documents. The LIMS shall print out a hardcopy of these documents and records at the user’s discretion.

The following figure shows a graphical concept of the Document Management System:

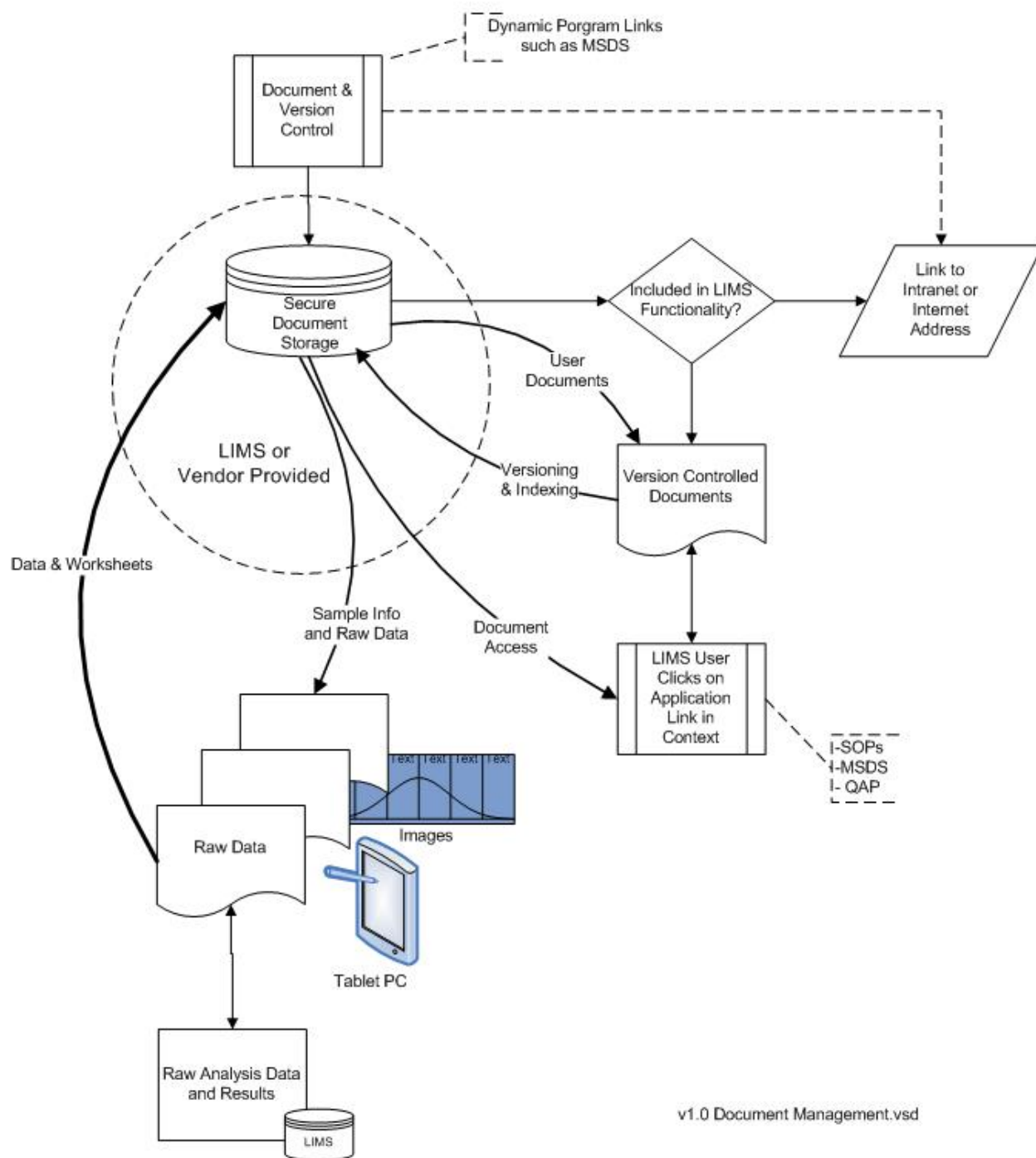


Figure 26 Document Management

3.3 Evidence Submission

The LIMS shall maintain a list of submitter codes assigned to different submitting organizations. The LIMS shall allow assignment of a unique customer code to each submitting organization.

In addition, the LIMS shall provide for distinguishing between subsections of the parent submitting organization. The format of the code shall be selected by SBCSD-SID.

3.3.1 Manual Submissions

The LIMS shall permit definition of multiple log-in screens (user interfaces) that are designed or organized to match the order of information on the forms used to submit evidence.

The LIMS shall permit use of submitter identification codes that will automatically populate the receiving screen. The LIMS shall permit the duplicate definition of a submitter if a different submitter code is assigned.

3.3.2 Electronic Submissions

The LIMS shall reduce the amount of manual information entry during evidence receiving/check-in by accepting electronic information from a variety of sources and formats, such as web-based Electronic Submissions. The LIMS shall accept manual entry to service customers that cannot use electronic submissions.

3.3.2.1 *Web-based Electronic Submission*

The LIMS shall provide for organizations to submit evidence submission forms electronically to SBCSD-SID. Allowable mechanisms shall include allowing the customer to fill out and submit an interactive web form that SBCSD-SID would make available from the SBCSD-SID web page for customers to use in documenting a submission. When the customer clicks the "submit" button, the web form shall automatically transfer the form contents to the LIMS where the information shall be held with a status similar to "Pending" until the evidence items are received at the laboratory. Additionally the customer shall be able to print or save to disk a copy of the information on the computer screen.

Several submitting agencies, external to SBCSD, utilize evidence tracking applications of their own. The LIMS shall permit the efficient transfer of evidence demographics for submission by a standardized EDD or equivalent electronic format to include the means for test code translation.

Another mechanism shall be for the SBCSD-SID to create a PDF file of all evidence submission forms available for submitters to download and edit using commonly available applications capable of filling in editable PDF forms. When the submitter sends the completed form electronically, authorized LIMS users shall be able to save the form contents in a manner similar to the web-based interface information.

When the SBCSD-SID receiving clerk enters the submitter information, the LIMS shall display the normal submission log-in screens containing the web-based submission information. LIMS shall permit this web-based form to retrieve information from the appropriate EDD or file mentioned above. The receiving clerk shall be able to make audited changes to any information on the LIMS screens.

The LIMS shall provide capability to scan submission forms using optical character recognition scanning and also allow easy linking of the scanned submission with manually entered receiving information.

3.4 *Evidence Receiving/Log-in*

The LIMS shall provide a streamlined, flexible method for receiving submitted evidence. The LIMS shall require minimal information entry before assigning a case identification number. After the identification number is assigned, the LIMS shall permit evidence log-in. During the evidence log-in process, evidence collection information contained on the submission form, as well as receipt information shall be accepted by the LIMS. The LIMS shall permit assignment to a laboratory area and examination assignment but shall also allow assignment at a later time.

The LIMS shall provide functions that will reduce manual entry of information associated with receiving evidence. For example, the LIMS shall provide the option of creating and using pick lists and other time saving approaches, such as project templates or profiles (for example; standard examinations conducted on a sexual assault kit), on receiving screens. The LIMS shall provide for movement through the entry screens to be consistent with the order of information provided on the submission forms. The LIMS shall provide "type-ahead" or auto-filter through list capability for manual data entry as well as all other entry fields in the LIMS.

The LIMS shall assist in maintaining a high-level of accuracy by monitoring input for common errors and inconsistencies such as wrong examinations selected for the type of evidence submitted. The LIMS shall allow logical field entry rules to be set, e.g., prevent entering a future date as evidence received date (unless specifically required). Also, the LIMS shall flag extremely old dates, as defined by SBCSD-SID.

The LIMS shall have a place for "comments" that are communicated throughout the System to authorized examiners, management, and end-users. These comments shall be used to describe any unusual circumstances or special requests observed during log-in or noted on the Submission Form. A client or submitter may want the examiner to be aware of certain information or request special evidence examination. The LIMS shall also allow for multiple levels of comments, definable by System Administrators. All comment fields shall allow for pre-configured, standardized comments (drop-down menu).

The LIMS shall allow receiving personnel to flag an evidence item, or groups of item, if any information on the submission form is unclear or causes conflict with normal processing procedures. The LIMS shall automatically notify designated SBCSD-SID personnel when evidence is received that may be unsuitable for testing. The LIMS shall allow log-in personnel to add comments that follow the evidence throughout all statuses, if the evidence is thought to be hazardous or highly contaminated. Evidence flagged for this reason shall be presented by the LIMS noticeably differently from other evidence.

For evidence that is submitted with unclear/conflicting submission forms or are flagged as "problems" for whatever reason, the LIMS shall be configured to automatically produce "problem letters" to be submitted to the originator of the evidence with an explanation of the problem and requirements (including due date) for problem resolution. The LIMS shall allow these "problems" to be selected from drop-down lists. The LIMS shall also maintain a tracking system to automatically alert laboratory personnel when problem evidence information has been received and/or if an assigned "action" date has passed.

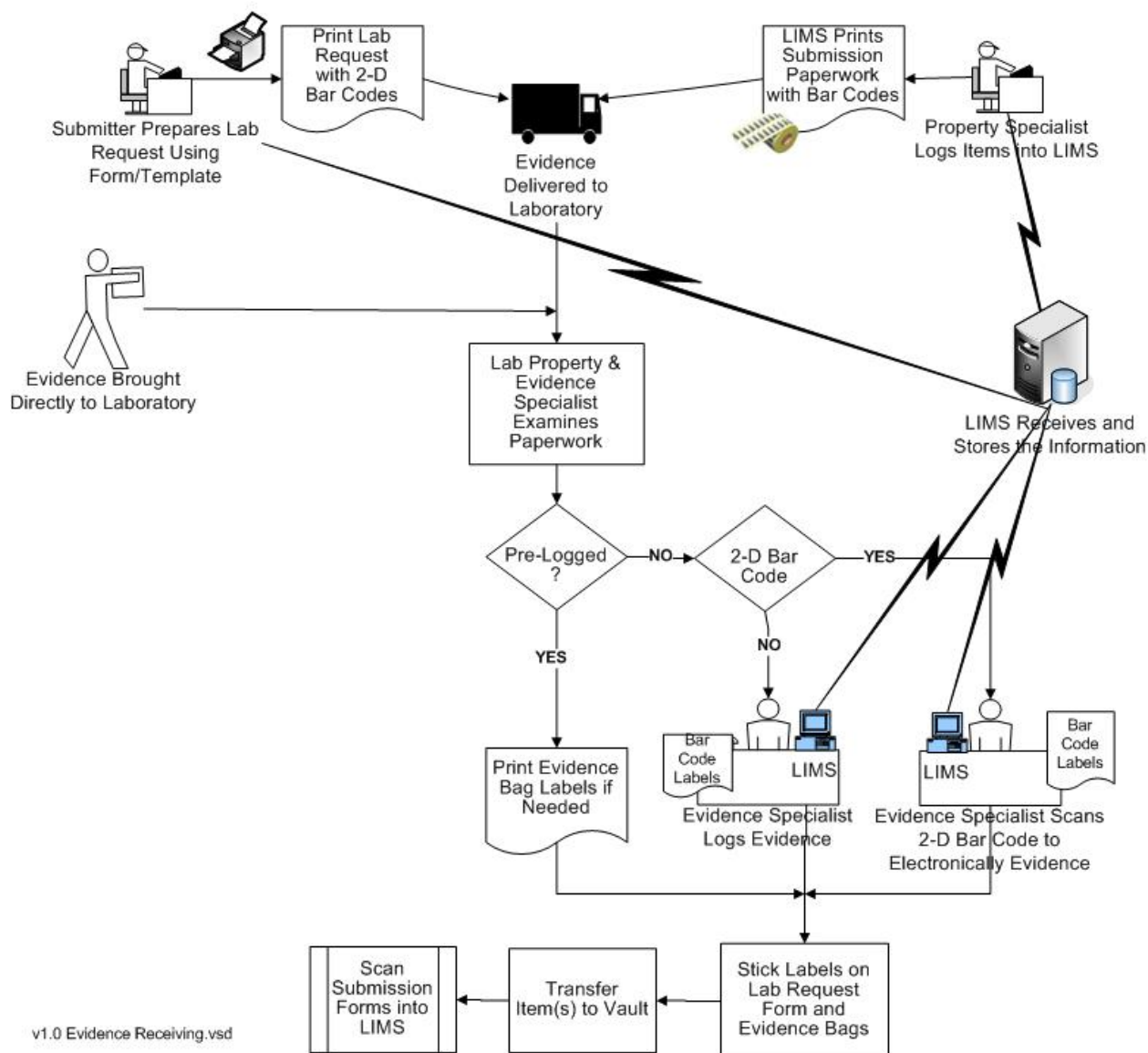


Figure 27 Evidence Receiving

3.4.1 Receiving/Log-In

3.4.1.1 Evidence Numbering

Minimally, the first receiving step in the LIMS shall allow assignment of a case identifier and evidence identifiers to evidence received by the Evidence Control Room. The LIMS shall maintain a distinct, sequential evidence numbering system and permit the laboratory to assign the alphanumeric pattern. Each evidence item shall be assigned a unique number by the LIMS. The LIMS shall ensure that evidence examined in multiple laboratory areas or being subjected to multiple examinations will have the same identifier. The LIMS shall generate evidence

identifiers for all evidence received. The LIMS shall also be capable of assigning additional evidence numbers at any point after the original receiving has occurred to accommodate sub-evidence, derived evidence, and created evidence (such as test firings). The LIMS shall record the relationship among original evidence, derived, sub-evidence, and all other designations of property or evidence.

The LIMS shall provide a user field to input an additional identification field on all evidence items to optionally hold an evidence identification value from the submitting organization. In addition, the LIMS shall provide for the input and storage of latitude and longitude information into the demographic description of evidence.

3.4.1.2 *Evidence Labels/COC*

The LIMS shall automatically create an ICOC and evidence labels during the first step of receiving. The LIMS shall provide for the assignment of priority status codes that are definable by SBCSD-SID. This priority status shall be searchable. Additionally, the LIMS shall allow authorized users to change the priority of a single examination or all examinations for a single evidence item or an entire submission at any stage of the process and shall notify assigned of the change.

3.4.1.3 *Assignment of Examination Codes*

During receiving/log-in, the LIMS shall allow, but not require, examination codes to be assigned to each evidence item, based on the request. The LIMS shall provide a means of filtering examinations specific to the laboratory section and evidence type. The LIMS shall provide the same filtering capabilities throughout all functions of the product.

The LIMS shall provide for automatically assigning a series of examinations for specific types of evidence. In addition, the LIMS shall allow for the inclusion of preconfigured conditional reflex rules. LIMS receiving screens shall include a method of assigning Laboratory Sections and/or Units to the evidence. The LIMS shall not allow the status of evidence to be changed to Completed if there are any Laboratory Sections or Units that have been assigned and have not completed (or cancelled) at least one examination for that evidence.

The LIMS shall be configurable to require and store a reason when an examination code is cancelled.

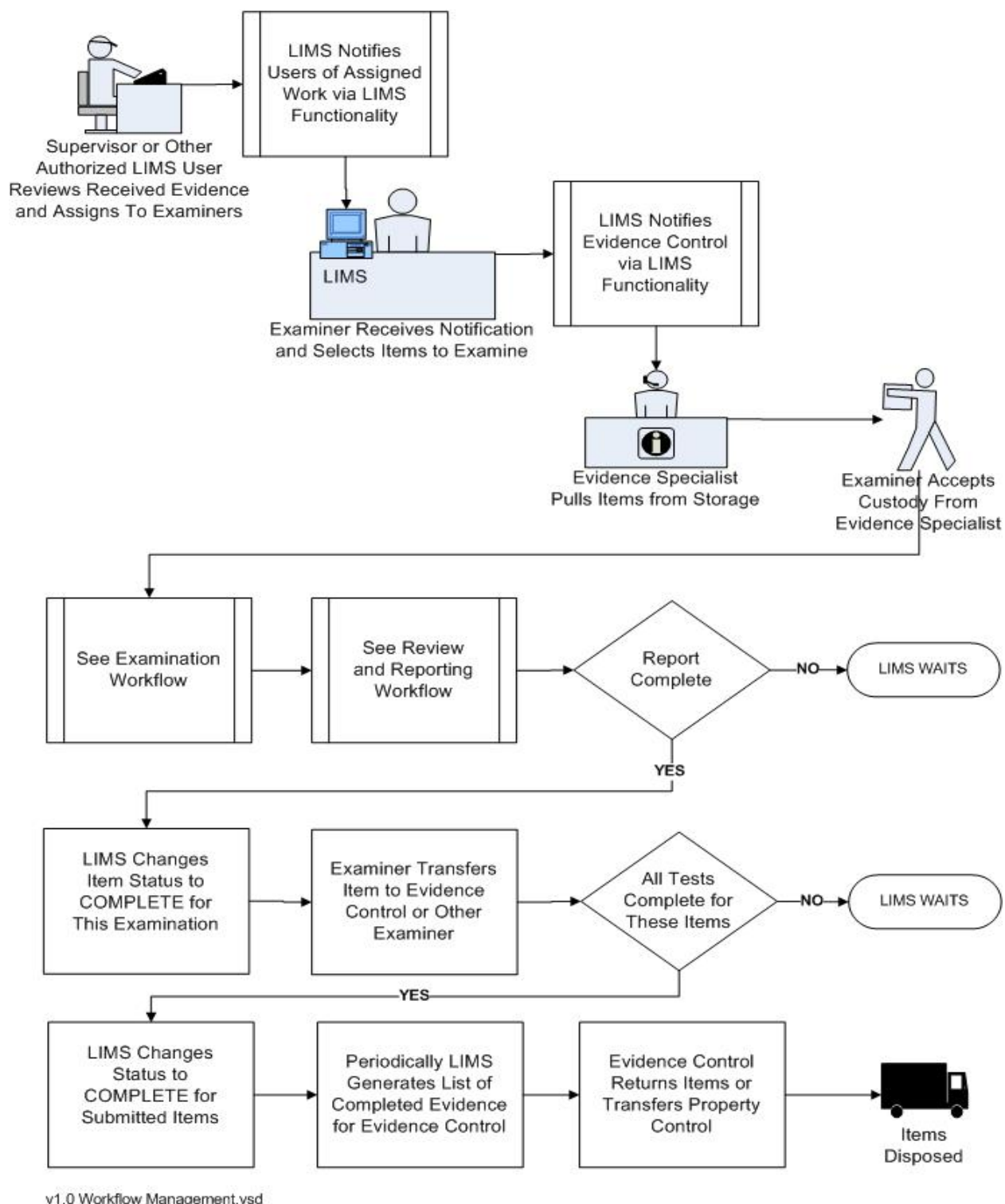


Figure 28 Workflow Management

3.4.2 Demographic Information

The LIMS shall enable receiving personnel to enter the remaining case, submission, or evidence "demographic" information. The LIMS shall provide "type-ahead" or auto-filter through list capability for entering this data. When entering multiple evidence items from the same submission the LIMS shall only require case and other common information to be entered once. Also, users shall be able to pre-fill the Log-in screen with information associated to an incident or case after input of an incident or case identification code via a drop-down menu, pick list, or type-in. Similarly users shall be able to pre-fill the Log-in screen with demographic information associated to a submitting organization in the same manner. In instances where the demographic information contained on the submission form is available electronically, the LIMS shall automatically upload the information. Upon electronic upload of demographic information, the LIMS shall allow the Evidence Control Clerk performing the log-in to edit the demographic log-in information before committing it to the database.

Information that the LIMS shall accept and manage includes, but is not limited to: Evidence Information (submitting organization, external ID, date/time collected, date/time submitted, etc.), examinations requested, date/time received, organization to receive results, and custody transfer information (relinquished by / received by). The LIMS shall allow for the entry of multiple contact names and phone numbers.

3.4.3 Examination Assignment after Receiving

In certain instances, evidence receiving personnel may not be able to assign examinations to evidence for a variety of reasons. As such, the LIMS shall allow Supervisory or other designated personnel to assign examinations to evidence after they are delivered to the laboratory section. Also, the LIMS shall allow designated personnel to cancel an examination assigned at log-in for an evidence item without canceling the item. The LIMS shall also allow for canceling an entire laboratory case/submission/evidence(s) with full audit trail.

3.5 *Subcontracting Analysis*

The LIMS shall have the capability to differentiate between evidence being examined in-house and evidence sent to external or other Reference labs. The LIMS shall be pre-configured to generate a COC document with information from the evidence receiving process such as the date/time evidenced, investigation reference, evidence numbers, and the examinations to be performed for subcontracted examinations. The LIMS shall have the capability to print required forms required by Reference laboratories and to populate fields on these forms with evidence information from the LIMS. The LIMS shall be able to record to whom the evidence was sent, the date sent, the date returned and the results. Data generated by subcontractors shall be entered into the LIMS manually, by scanning using optical character recognition technology and by acceptance of an EDD. These results shall be reviewed in the LIMS by the Laboratory Supervisor prior to reporting the results. The LIMS shall produce a warning if results for evidence sent to external laboratories have not been returned in a user-specified amount of time.

The LIMS shall provide a means of tracking subcontractor logistics associated with different evidence types such as fees, outstanding work, and evidence types and distribution.

3.6 QC Batch Preparation

Many SBCSD-SID areas utilize a one-at-a-time analysis process. Other areas have huge volumes of evidence and have QC frequencies, while other areas run QC once a day for all testing to be done that day. The LIMS shall provide the option to prepare evidence in batches that include the appropriate QC indicators specific to each analysis method. The LIMS shall permit user configuration to establish the QC requirements for the various method codes. It shall be simple to design on-screen forms and printed documents that contain the type, frequency, and placement in the run sequence of QC items and standards, as well as QC acceptance criteria for the particular analysis. The LIMS shall store pre-defined worksheets for the formats currently in use with the capability for easy configuration of additional formats as needed. Bench sheets shall be identified by examination code and the LIMS shall populate the sheets with evidence selected by the examiner or evidence available for analysis. Examiners shall have the capability to select any or all available evidence to be included. These sheets shall contain basic information such as, but not limited to, examiner name, date, time, method code, evidence number, final volume, dilutions, reagents, and QC items. The LIMS shall have the ability to generate additional labels to be placed on prepared evidence and QC in the batch. Evidence preparation bench sheets shall include a mechanism for tracking all standard reference materials and reagents back to their original source. The LIMS shall apply calculations, as pre-defined by the user, to raw data for analyses. Once a bench sheet is filled out, the LIMS shall allow editing of that bench sheet. The LIMS shall provide the capability to un-batch and re-batch analysis batch run lists.

The LIMS shall match individual evidence with their respective QC batch and allow access to the associated QC results. The LIMS shall provide a place for comments on the evidence worksheets to describe any unusual circumstances or pertinent information. These comments shall be retrievable and associative to the data for which it was originally intended. The LIMS shall distinguish between reportable comments and In-house comments (non-reportable) and provide a visible means of distinguishing the two without opening the comments field. User rights assignment shall be distinguishable for various levels of comments fields.

The LIMS shall provide the option to print copies of the evidence worksheets, associated QC data, and associated comment fields.

The LIMS shall calculate QC summary statistics on a unique examination or source. The user shall be able to select a date range or number of data points to be used.

Information about standards and reagents used in creating QC items shall be used by the LIMS to calculate QC results. LIMS shall permit the creation of evidence collection kits from raw materials with the assignment of standard lot information.

The LIMS shall provide the examiner with lists of pending work based on analysis/method codes. In some cases, the analytical run sequences shall be determined by the QC batch

preparation worksheets. Instrument calibrations and other method requirements will be performed in accordance with the established SOP for that method.

The LIMS shall have the capability of storing multiple runs for a single run list, allowing the examiner to select which result they want to accept. The LIMS shall have the capability of rejecting a single analyte on a multi-analyte test without rejecting the entire examination.

The LIMS shall provide logic that reviews an entered result and, depending on the examination, automatically assigns the next (confirmatory or reflex) examination based on the result. This sequence of logic shall be configurable by examination and laboratory area by authorized SBCSD-SID personnel. Part of the configuration shall include the ability to designate which examinations are completely automatic and which examinations will ask for manual confirmation of the next examination assignment.

3.7 Evidence Prep and Non-Interfaced Instrument Analysis

The LIMS shall support evidence preparation and analysis with non-interfaced instruments by paper worksheets and electronic worksheets. Other methods may also be supported.

The LIMS shall generate evidence preparation/analysis worksheets (both on-screen and printable) containing identifiers of the evidence selected by the user for analysis. For those processes selected by SBCSD-SID, the LIMS shall accommodate manual entry of evidence preparation data on a single screen when evidence is grouped for preparation or grouped as a QC batch. The LIMS shall accept, store and manage computer files, such as a scanned worksheet or digitized photographs, in a manner that associates the file with the analysis of the evidence. (See Document/Records Management)

The LIMS shall display information collection forms designed similarly to current SBCSD-SID work sheets on a personal computer, including PCs with tablet capability and synchronization for field or portable use. The LIMS shall receive the forms (or the contents) back and automatically post/synchronize the information to the proper records and fields. Tablet PC capability shall be available for evidence processing, evidence preparation and analysis results where the instrument is not interfaced.

The LIMS shall produce work-lists by querying the database by examination code, group of examination codes, instrument, laboratory area or assigned examiner. The user shall be able to prioritize the workload by parameters such as remaining hold time by evidence date and receive date, special turnaround requests, priority (e.g., standard, rush or repeat), or by date received. The work-lists shall be easily configurable depending on the laboratory's requirements and shall be printable or available on-screen with user-specified fields pre-populated. The on-screen work lists shall accept and store user input pending automatic input into the LIMS.

From the lists, the examiners shall be able to select evidence to be processed and generate QC batch worksheets if required. The LIMS shall provide the QC batch work lists on-screen, in printable form, or as an EDD to be able to be uploaded to laboratory instrumentation, optionally through third-party interface.

3.7.1 Data Entry

The LIMS shall provide an option for input of analytical results for a single evidence item or a group of items. The LIMS shall provide a location or locations for results storage for examinations that are completed prior to completion of demographics entry.

The LIMS shall be capable of uploading or importing analytical results and QC data from electronic file sources such as Excel spreadsheets, text delimited files, or (optimally) provide for equivalent worksheet (screen form) design capabilities for users of the system. All data generated shall be retained by the LIMS and shall be accessible by any authorized user. Results, QC information and evidence source details shall be exportable by the LIMS into Excel spreadsheets.

The LIMS shall support entry of numeric, non-numeric, "less than"/"greater than", positive/negative, and long narrative results entry, as well as comments. The LIMS shall facilitate results entry by presenting entry screens in the same order as worksheets or in any other order selected by the user. For both numeric and non-numeric entry fields, the LIMS shall allow the fields to be configured to automatically default to a value assignable by the SBCSD-SID or to contain drop-down lists of acceptable results. For example, the LIMS shall provide the option to allow manual entry of positive entries only and then default the remainder of tests in the batch to a negative value. The default value shall be assignable based on a variety of business rules (e.g., customer, test, laboratory section, etc.). The LIMS shall also offer the capability to simultaneously enter one result for multiple specimens. The LIMS shall also monitor and prevent improper results entry, e.g., an alphabetic result in a numeric-only field, as well as flag "absurd" results. These capabilities shall be configurable by site.

For numeric entry, the LIMS shall provide fields for actual data results and associated normal ranges. The LIMS shall take into account the changing nature of the normal ranges based on conditional criteria of the evidence and apply the correct normal range based on all criteria.

For narrative and non-numeric entry, the LIMS shall permit selection of pre-configured, standardized comments as well as free entry of long narrative input including cut-and-paste between the LIMS and other applications. The LIMS shall provide "type-ahead" or auto-filter through list capability for entering narrative and non-numeric data. The narrative entry method shall permit editing and spell checking. The LIMS shall allow any authorized user to add or remove spell-check dictionary entries.

The LIMS shall allow the addition of user definable information fields for special programs that may be reportable as an EDD or electronic message to other agencies.

Data entry screens shall be configurable by the appropriate personnel designated in each Laboratory Area.

3.7.2 Image Results

The LIMS shall have the capability of storing and associating digital pictures, graphics, chromatograms, etc., to the associated evidence item(s). The LIMS shall accept and store multiple image or graphic files in PDF, JPEG, TIF or GIF format with analysis results. It is not

required to store the image in the database but the image file name and location shall be hyperlinked or otherwise stored in the LIMS database as part of the analysis results. The LIMS shall protect images against alteration.

The LIMS shall display the image when the file name or other feature is selected by a user and shall include the image in electronic or printed reports as appropriate. When an image of an evidence item is related to other evidence items, the LIMS shall create the same hyperlink between all evidence items and the single stored image, e.g., when multiple evidence items are assigned to one incident or case.

The LIMS image format shall be editable by the LIMS or standard image editing programs to create a transparent background drawing layer over a stored image for the purpose of highlighting, notes inclusion, and other basic drawing functions used to facilitate sketching. The original image and all subsequent images shall be versioned and stored in the LIMS DMS.

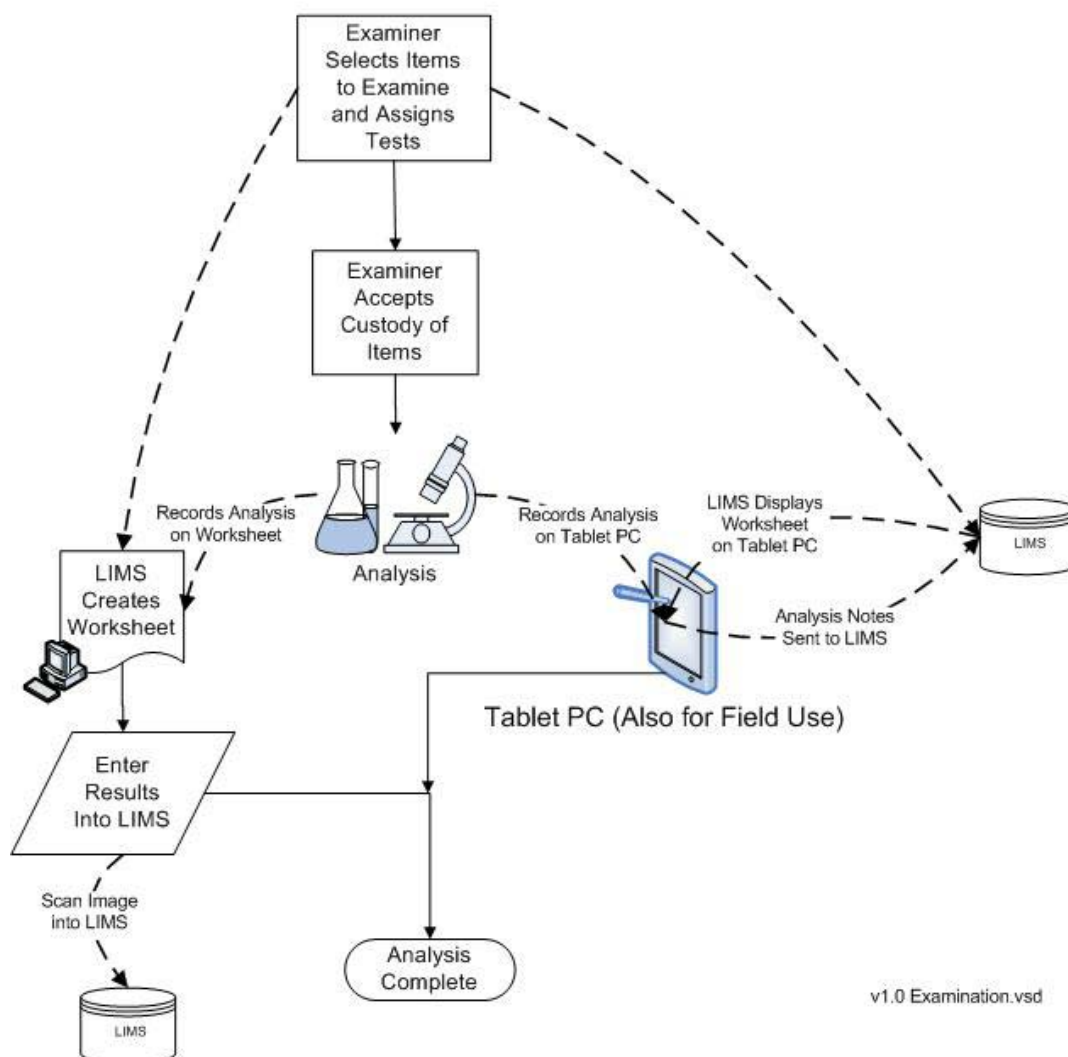


Figure 29 Manual and Non-interfaced Examinations

3.8 *Instrument Interfaces*

The LIMS shall provide the capability to reduce manual entry by accepting instrument results electronically, directly from the various laboratory instruments. Whenever possible, instrumentation shall be interfaced bi-directionally to the LIMS via TCP/IP. The LIMS shall be configured to accept data files from laboratory instrumentation listed in the RFP and other third-party software programs and be provided turnkey, meaning that the functionality required will be delivered pre-configured and capable of use in a production environment at the time of system acceptance.

The LIMS shall receive electronic data input from numerous sources to accommodate not only the initial system configuration, but also future expansion as needs arise. Since it is difficult for the laboratory to predict future requirements, the LIMS shall have the flexibility and capability for trained SBCSD-SID users to interface additional instruments to the LIMS.

3.8.1 Instrument Run Lists

The LIMS shall create electronic files with the necessary evidence, Quality Control (QC), and examination information to be downloaded into all instruments that are capable of accepting run lists. The LIMS shall have the ability to download lists (sequences) of evidence identifiers for analysis. Instrument data shall be read from the files and automatically stored in the LIMS database in the same locations as used for manual or imported data entry. The interfaces shall use LIMS-managed batch information to create a run-list within the interfaced instrument.

3.8.2 Instrument Result Upload

The LIMS shall hold uploaded results pending review by the examiner or technician. The LIMS shall automatically evaluate QC item results and provide on-screen indication when the QC results are out of range. When the examiner approves the instrument results in the LIMS, the LIMS shall automatically associate the results with the correct evidence and QC items. The LIMS shall retain the original output file, optionally after conversion to a file format required by the LIMS, within the LIMS. The LIMS shall automatically associate the result file with the run list and/or with the individual evidence and QC item. The LIMS shall maintain the instrument file within the LIMS document management functionality.

The LIMS shall enable interfaced instruments to continue to run and collect data when the LIMS is down. When the LIMS comes back on line, the system shall allow results to be imported into the LIMS and associate runs with cases, incidents and evidence items.

3.8.3 Instrument Graphic Output Storage

The LIMS shall accept and store, optionally after conversion to a file format required by the LIMS, graphical output generated by instruments such as spectra, images, and plate/well maps. The LIMS shall associate the files with the run list and / or individual evidence and QC item. The LIMS shall maintain the graphic file within the document management function. (See Document Management.)

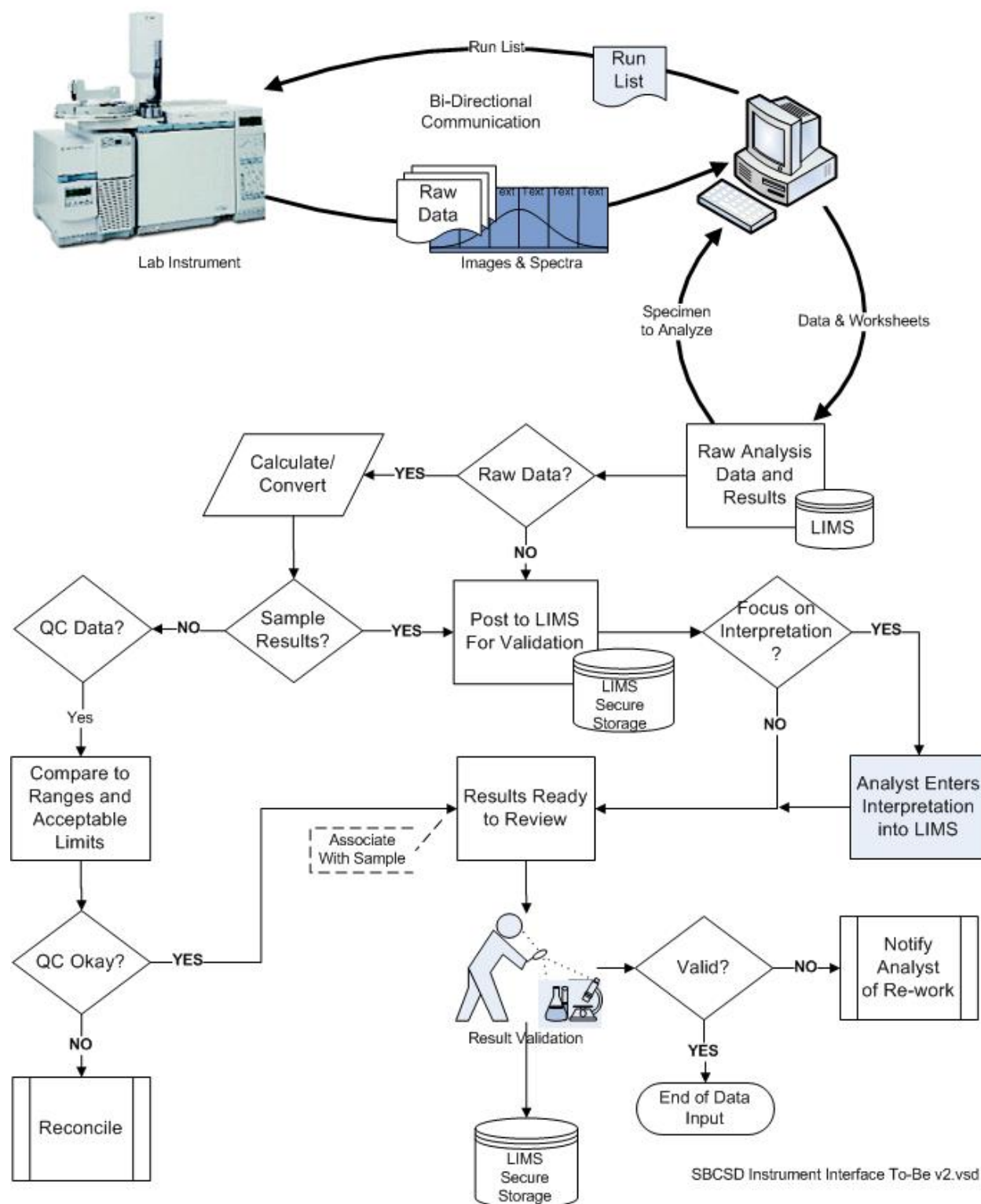


Figure 30 Instrument Interfaces

3.9 *Data Reduction*

The LIMS shall calculate final reportable results from input of raw, measured data, as well as allow for hierarchical calculations. Some examinations require mathematical calculations to produce the final reportable results. The LIMS shall automatically take into account variables such as instrument calibration response, initial and final evidence amount, final volume and dilutions when performing calculations. Upon entry and calculation of final results, the LIMS shall be capable of comparing the final results to limits or thresholds defined for that examination. If a limit violation has occurred, the LIMS shall notify the examiner or other designated personnel.

The LIMS shall convert raw data to the correct final reporting units such as mg/L or µg/L using specific guidelines provided by SBCSD-SID regarding significant figures, rounding, truncation, and formatting.

3.10 *QC Data Reduction*

The LIMS shall be pre-configured to automatically calculate and store QC results within the LIMS in terms of, for example, the relative percent difference for duplicates. To facilitate the review process, the LIMS shall create and display control-charting data in order to readily access the established upper and lower control limits. In addition, the LIMS shall automatically flag out-of-limit control QC items. The LIMS shall allow the examiner to select the final evidence results to be reported, as well as indicate evidence that must be re-run as a result of the QC review process. To facilitate the review process, the LIMS shall use color, or another appropriate identifier, to differentiate acceptance, warning, and rejection ranges.

LIMS shall optionally permit, on designated parameters, the use of comprehensive rules of QC Chart interpretation as those found in AT&T/Western Electric rule sets for Statistical Process Control (SPC) charts. Additionally, LIMS shall provide tools for the analysis and setting of SPC limits to include a means for parameter set outlier identification and exclusion.

3.11 *Data Review*

SBCSD-SID SOPs prescribe the protocols that are followed to ensure the quality of the data produced by the laboratory. Examination results are considered valid when accuracy and precision, as well as calibration data meet the criteria set forth in the SBCSD-SID Laboratory SOPs.

The LIMS shall be configurable to require various mandatory levels of review, but authorized LIMS users shall be able to configure the number of levels of review, based upon Laboratory Sections, Laboratory Units, or analysis methods.

The reviewer shall access information through the LIMS to validate results for a single evidence item or QC batch. First, the LIMS shall list the analyses requested for each item of evidence and provide a view of any other information noted during log-in or attached to the evidence group. The LIMS shall display information concerning the results for the target analytes and for

the examination code. The LIMS shall track all associated QC information. The LIMS shall automatically flag data that exceeds a defined QC or program limit and notify designated SBCSD-SID personnel that a limit was exceeded. The LIMS shall allow the capability for SBCSD-SID to assign users the right to make changes at data entry and at each level of review.

Where multiple parameters have been examined on a single item of evidence for multiple items of evidence related to a single incident or group of incidents, the LIMS shall allow results to be compared. The reviewer shall be able to set a re-analysis LIMS status based on this view.

The LIMS shall require reviews to be documented, dated and accepted by the reviewer at each level. The LIMS shall print a hardcopy of the review record if required.

The LIMS shall facilitate the use of business rules to ensure that all required conditions are satisfied before results are passed to the next level of review or approved for reporting.

The LIMS shall be pre-configured to allow the option of utilizing password-based or other form of electronic signature, by which only designated personnel shall be authorized to conduct data review. The LIMS shall recognize authorized passwords, and shall maintain a traceability record of the review process. For each level of review, the LIMS shall record the date, time, identity, and electronic signature of the reviewer.

3.11.1 Examiner Review

The examiner who performs the analysis has the prime responsibility for the correctness and completeness of the data. Upon completion of the instrument run or the manual batch entry, the LIMS shall allow the examiner to review the data on an item-by-item basis, or on a batch basis. If the reviewer decides to review the data on a batch basis, the LIMS shall display, on one screen, all item and QC evidence included in the batch. The examiner reviews quality control data, calibrations, matrix difficulties, method detection limits, deviations from the SOPs, and comments about the evidence that have been carried through the system or unusual circumstances that may have occurred. There shall be a place within the LIMS for the examiner to write a short narrative to comment on any unusual circumstances or other pertinent information. The decision to accept or reject the entire run or a portion of the run is made based on this review. The LIMS shall allow the reviewer to reject individual measurements when multiple measurements have been performed and to reject the results of individual evidence from a batch. The LIMS shall allow for the examiner to make this decision without impacting or otherwise disrupting the normal functioning of the LIMS.

If the examiner deems the data to be valid, the LIMS shall allow the examiner to validate, in one action, the entire batch.

3.11.2 Technical or Peer Review

The LIMS shall provide for review by a qualified examiner who was not directly involved in the analysis. The LIMS shall automatically notify the reviewer that information is ready for review. This reviewer looks over the results and checks the calibrations, calculations, and other QC data. The LIMS shall allow the technical reviewer to review the information on an item-by-item basis or on a batch basis. If the reviewer decides to review on a batch basis, the LIMS shall

display, on one screen, all evidence and QC items included in the batch. The reviewer shall have automatic, quick access to all quality control data such as calibration information, blank results, method detection and method reporting limits, surrogate values, dilutions, and comments on unusual circumstances or deviations from the SOPs that may have occurred.

If the reviewer deems the results to be valid, the LIMS shall allow the reviewer to validate, in one action, the entire batch. The LIMS shall provide Supervisors with the ability to simultaneously validate lower levels of validation while approving their own level. If no deficiencies are found the reviewer shall be able to approve the entire set by selecting the approval option on the screen.

If errors are found or if something does not look right, the LIMS shall allow the reviewer to assign a "disputed" status. The LIMS shall allow the reviewer to enter comments pertaining to the disputed data. Additionally, the LIMS shall allow the reviewer to correct the error or send the results back to the previous level of review with comments. The reviewer shall also have the ability to approve partial or draft results via the LIMS for release to the submitter.

Technical Review completion by the examiner/supervisor shall be documented, dated and recorded in the LIMS.

3.11.3 Administrative Review

The LIMS shall require an administrative review that follows the same procedures outlined for Technical Reviews.

3.12 General QA Requirements

SBCSD-SID SOPs prescribe the protocols that are followed to ensure the quality of the analytical data produced by the laboratory. QA in the SBCSD-SID is applied individually by each Section with the SBCSD-SID Quality Assurance Officer providing oversight of the overall program. Each Section is responsible for its quality systems which include: evidence storage, evidence transport, method of analysis, examination reagents, equipment maintenance, quality control, examiner performance, training, supervisor review, record storage, and customer service. The LIMS shall support Section-specific SOP business processes and QA policies and procedures and prohibit various unsafe or quality-contrary practices where possible.

The LIMS shall create and allow viewing of control charts. Data generated from the analyses shall be automatically entered by the LIMS into the appropriate control charts. Resulting control limits shall be readily accessible to the examiners and data reviewer with optionally automatic updating of control limits. Control charts are also used to track trends and validate results. All control-chart QC data shall be available to authorized users in both graphical and tabular format and shall be easily associated with the evidence data that it represents. The LIMS vendor shall indicate any third-party software required and provide the software as part of the overall system. The selected Vendor shall provide the control charting software (if not included in the LIMS application) and provide the integration of the software with the LIMS.

The LIMS shall have the ability to electronically store a Corrective Action Report (CAR) and associate it to an individual analysis, batch or evidence.

The LIMS shall allow results editing even after evidence is completed and reported while maintaining full audit trail requirements.

3.12.1 Environmental QA/QC Monitoring

Most laboratory areas in SBCSD-SID are required to maintain QA/QC records of environmentally controlled spaces and equipment in addition to standards and reagents. Certain criteria must be met in order for examination findings to be considered valid. The LIMS shall provide a function to record and track information associated with these QA/QC items.

The LIMS shall monitor and record such environmental conditions as temperature, humidity, carbon dioxide content, water quality, and protection of equipment and instrumentation from fluctuations and interruptions in electrical current, etc. The LIMS shall automatically read or accept output from continuous reading sensors for the monitored conditions and associate the values with the specific controlled space.

3.12.2 Instrument Maintenance

Laboratory instrument and equipment records are critical for maintaining data quality and are part of laboratory accreditation requirements. The LIMS shall track calibration and/or maintenance information relating to each analytical instrument and major SBCSD-SID asset, including: SBCSD-SID inventory number, description, class, serial number, model number, manufacturer, supplier, location, date of purchase, dates of operation, procedure version, point of contact (including name and e-mail address), preventive maintenance scheduling (daily, weekly, monthly and number of runs cycles), calibration records, warning of when preventive maintenance is due, maintenance contract records, maintenance records (date and nature of work), recertification records (some instruments sent out for re-certification), and repair records.

The LIMS shall enable monitoring on a fixed schedule or by tracking specified acceptance criterion. This function shall be accomplished directly by the LIMS, as delivered, or by an external program provided by the vendor. Examples of instrumentation and equipment requiring monitoring are:

1. Pipettes
2. Balances, pH Meters
3. GC/MS
4. FTIR
5. Refrigerators and Freezers
6. Gas chromatographs
7. DNA equipment
8. Scanning Electron Microscope

The LIMS shall track and report this information, and generate warnings when/if conditions exceed designated parameters. It is not anticipated that it will be necessary to link specific events (power outages, open cooler door, etc.) to monitoring results, other than an association of the date and time of these events. The LIMS shall track compliance against different maintenance schedules for each item.

The LIMS shall provide a mechanism for calibration intervals to be set by time or usage requirements. All calibration activities shall be capable of being documented and checked against calibration limits. The LIMS shall flag "out of limit results". A field for narrative comments shall be available with the LIMS so that results or actions can be explained.

LIMS scheduling of routine maintenance intervals for SBCSD-SID assets shall be managed according to manufacturer recommendations or SBCSD-SID operating procedures. Faults, breakdowns, and non-routine operations and maintenance costs shall be recorded and tracked in the LIMS with the LIMS storing an optional, brief narrative explanation of the maintenance performed. Various printed reports shall be included with the LIMS, such as:

- Instrument inventory listing with calibration and maintenance schedules
- List instruments due for calibration within X days
- List instruments due for maintenance within X days
- Overdue calibrations or maintenance
- The entire maintenance log for any instrument
- Maintenance logs including routine and/or non-routine maintenance

In a similar manner, the LIMS shall monitor the Draeger breath alcohol instruments periodic accuracy checks (see section 2.3.2). The LIMS system shall send courtesy memos to remind key users of the periodic check requirement and to alert breath alcohol staff to non compliance issues, and expired solutions.

3.13 Reporting Results

The LIMS shall support the reporting processes required by SBCSD-SID and its customers. The LIMS shall enforce and automate the quality review process employed by the SBCSD-SID. The LIMS shall send results in a variety of methods.

3.13.1 Analysis Results

SBCSD-SID forensic examination reports document the results and conclusions of testing within individual areas or disciplines such as latent prints, alcohol and narcotics, forensic biology, firearms, and trace. The LIMS shall automatically generate the final report of analysis within a single discipline for all evidence in a submission immediately after approval of the last results for all assigned examinations of that discipline of all evidence in the submission. The final report shall not be released and electronically transmitted results shall not be sent by the LIMS until all required reviews are complete. In addition, the LIMS shall provide designated personnel (e.g., the Laboratory Manager) the capability to prevent the issuing of a report to designated

recipients. Upon final approval the LIMS shall send the generated report to a print, fax and/or e-mail queue. However, the LIMS shall also provide for the printing of immediate reports by manual request. In this case, the LIMS shall allow a comment to be attached stating that the report was generated manually and to whom it was sent.

3.13.2 Report Generation

The LIMS shall provide the means of designing multiple report formats to meet laboratory requirements. The LIMS shall generate Main Reports, Reanalysis Reports, Supplementary Reports, and Revised Reports, when appropriate.

SBCSD-SID has specific reporting requirements that shall automatically be performed by the LIMS. As a minimum, the LIMS shall support Microsoft Word, Excel, Access, Adobe Acrobat, SQL Server, and Crystal Reports as programs for report generation and shall allow attachment or importation of Word documents to generated reports. The LIMS shall also support output in XML format for reporting.

The LIMS shall provide query capabilities for the database and input information such as submitter, program or funding codes, date ranges, section or departmental areas, evidence identifier range(s), laboratory assigned number range(s), and QC data, in a totally configurable format. Report formats and layouts shall have flexibility and allow changes in report element sequence. Reports shall allow for inclusion of comments pertaining to, for example, log-in, evidence preparation, and analysis, along with evidence results and QC information.

Authorized personnel shall be able, through password access, to edit any and all information included on the report documents. The LIMS shall maintain a record of all changes to report information that have been entered through the use of audit trail functionality.

Reports shall be customizable to contain evidence results only or to also include QC data. Forms shall be designed to be portrait or landscape oriented. The LIMS shall have the ability to include information regarding how reports are to be distributed, such as by fax, e-mail, or any special reporting requirements for mailing multiple (footnote identified) copies. The LIMS shall be configured to automatically hold all reports from specified laboratory areas, or reports that have been passed through to specified laboratory areas even though they may have originated in other areas of the laboratory, until released by authorized personnel.

The vendor shall develop and deliver ten (10) additional, filterable client-requested reports prior to finalization of the LIMS (pre-"Go Live" date), and in accordance with provided formats and filtering options. The vendor shall also ensure that SBCSD-SID is supplied the training required to create new integrated reports. The proposal shall include examples of potential report formats that the SBCSD-SID may utilize.

The LIMS shall have the ability to automatically generate reports on a scheduled or batch basis. The LIMS shall allow SBCSD-SID to designate the number and destination of the reports that are to be printed, e-mailed, posted to a website, or faxed. The LIMS shall also have the ability to automatically generate and send a report and/or notification when a triggered event occurs in the LIMS, e.g., when a controlled substance analysis meets the felony charge threshold. Final results shall be made accessible (with security) to the submitting parties via e-mail,

Intranet, or Internet. EDD's of final and preliminary results shall be available in a variety of final formats.

3.13.2.1 *Final Reports*

Final Reports shall include all examination results within a single discipline from all items in a case that are identified to be reported. Reporting formats shall be developed to include results for a single parameter or numerous examination results on the same sheet. Final report designs shall have flexibility and allow changes in report element sequence. Reports shall include comments pertaining to log-in, evidence preparation, and analysis, along with evidence results and QC.

3.13.2.2 *Reanalysis Reports*

Reanalysis reports are used in two situations:

- The Quality Assurance Officer (QAO) may request an analysis as part of the laboratory's QA program. This analysis will be done by a criminalist who also has responsibility for QA assignments within the section.
- The criminalist who performed the original analysis is not available for court and the replacement criminalist chooses to re-analyze some or all of the evidence.

The reissued report shall be clearly identified as a Revised Report and shall provide for the signature (digital, if the report is to be issued electronically) of the Supervisor. In addition, the generation of a Revised Report shall trigger an automatic notification to the QAO.

3.13.2.3 *Supplementary and Amended Reports*

Supplementary reports are used for additional analysis, e.g., if the DA wants analysis of units in a case that not been previously analyzed. The report shall be clearly identified as a Supplementary Report.

3.13.2.4 *Reprinting Reports*

The LIMS shall provide reprint capability of any report while maintaining and reporting original print date and case and evidence demographics. This functionality shall reproduce the original report with original signatures and the original report date.

3.13.2.5 *Secure Access to Reports*

The LIMS shall provide access to reports in an on-line manner after proper authentication. The LIMS shall be capable of granting read-only access to authorized personnel on an agency specific basis and on a regional-basis for DAs.

3.13.3 E-mail and Fax Reporting

The LIMS shall be configured such that reports can be automatically or manually e-mailed and/or faxed. The LIMS shall provide functionality that allows users to designate which reports are to be automatically e-mailed and/or faxed to certain clients. The LIMS shall pass reports to

e-mail/fax servers at the SBCSD facility after final approval of the results. The LIMS shall provide verification to SBCSD that e-mails/faxes were sent to clients.

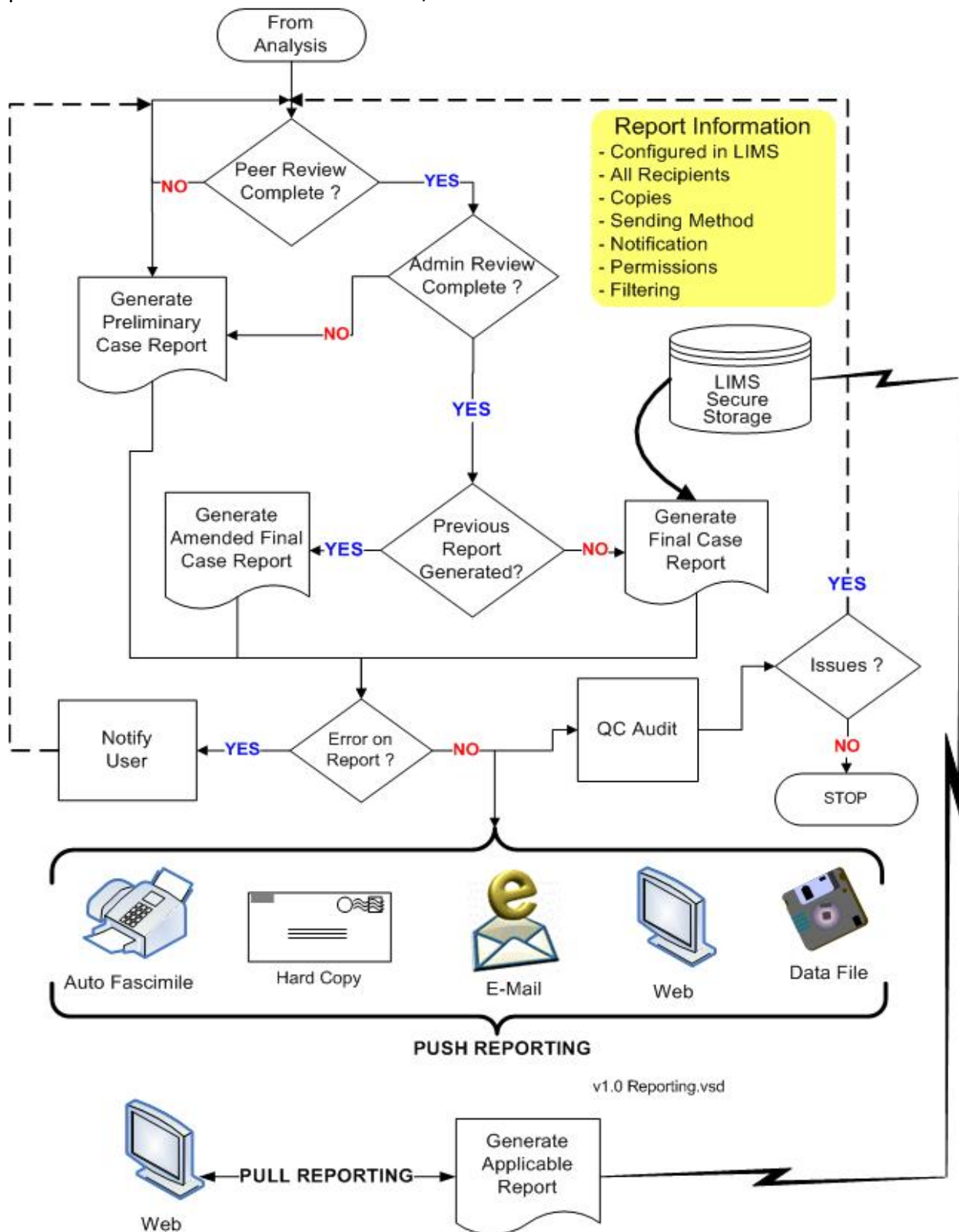


Figure 31 LIMS Reporting

3.14 Evidence Storage

The LIMS shall maintain information about the storage location of all evidence even after analysis and reporting are complete. The storage location shall be searchable to produce an inventory or to permit locating evidence with specific characteristics.

SBCSD-SID retains many items of evidence for long periods. Some items are used as positive controls while others may be used for training, sting operations, or research. For evidence that is retained, the LIMS shall be capable of identifying the storage location and all analytical results, QA/QC information, and related information concerning the evidence.

The LIMS shall track and provide storage location and movement information details of evidence to include but not limited to the following:

- Define storage locations using a 4-level hierarchy.
 - Level 1 – Storage location (e.g. Freezer/Room...)
 - Level 2 – Sub-storage location (e.g., shelf number...)
 - Level 3 – Container (e.g., box...)
 - Level 4 – Evidence Item
- Users authorized to remove items from the area
- Store various attributes against a storage location (e.g., room temperature/freezer/..., capacity...)
- Report on storage location by various attributes
- Assign storage location IDs at all levels of storage locations
- Print storage location bar code (or equivalent technology) labels to label storage locations
- Scan storage location bar code (or equivalent technology) labels to enter storage location info into system
- Flag items that have been stored in excess of a time period that is configurable by authorized SBCSD-SID personnel

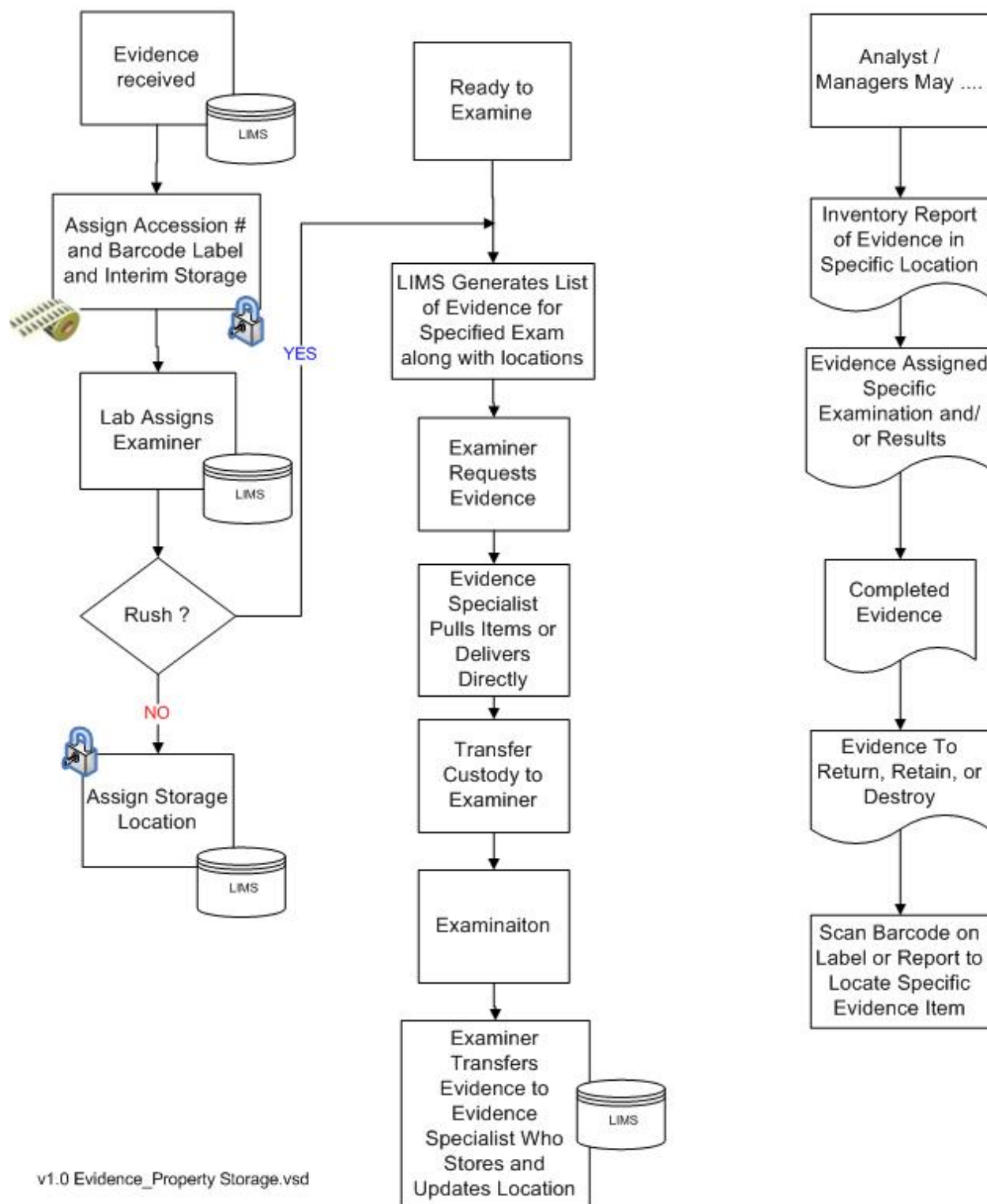


Figure 32 Storage Management

3.15 *Scheduling*

The LIMS shall maintain an unlimited number of schedules and scheduled events in order to reduce the effort required to track these activities. The LIMS shall include a robust scheduling tool that allows flexibility for *ad hoc* changes. As a minimum, schedules shall be maintained for Routine Maintenance of Instruments and Other Equipment, Internal and External Training, Calibration, Proficiency Testing, Audits, QC, reagent expiration dates, on-call responders and supervisor, duty (work), court scheduling, and appointments.

Schedules shall be capable of being set at different intervals and shall include configurable lead times that can be entered by designated personnel. The LIMS shall provide functionality utilizing lead times as triggers to send reminders to appropriate personnel of upcoming scheduled events. The LIMS shall also provide for notification of appropriate personnel if specified actions are overdue, e.g., instrument calibration or examiner competency reviews. The schedules shall be printable and capable of being faxed, e-mailed, etc.

The LIMS shall support the scheduling events depicted in Figure 33.

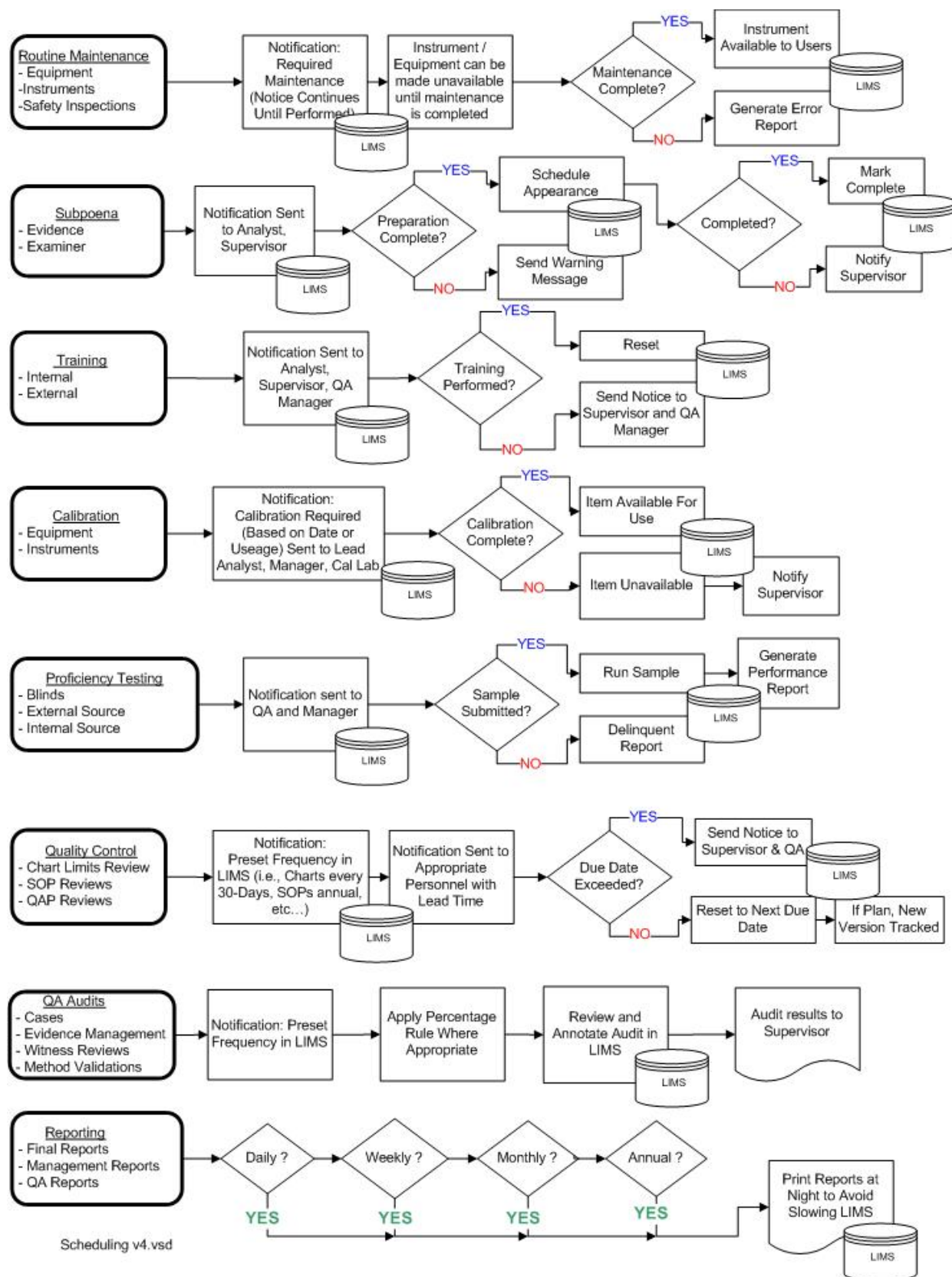


Figure 33 LIMS Scheduling

3.16 SBCSD-SID Workflow Support Functions

The items contained in this section shall be provided in direct support of the previously described SBCSD-SID Workflow Processes. The SBCSD-SID may decide to not use one or more of the functions requested in the following sections, dependent upon management decisions. Therefore, the capability for the requested functionality shall exist without requiring mandatory use by all LIMS users or Units.

3.16.1 Query Functionality

The LIMS shall provide a simple method of designing, and saving for re-use, queries and *ad hoc* queries. The LIMS shall permit storage and later execution of queries and *ad hoc* queries. The output from *ad hoc* queries shall be able to be directed to a computer file for subsequent analysis by other software.

Some query requirements are illustrated in sections describing Workload Management, Evidence Storage and Evidence Disposition, Inventory, Asset Management, Data Entry and Report Generation. The LIMS shall provide the ability to query the database as specifically designated throughout this document and generally in support of all functional areas described throughout this document.

The LIMS-provided basic properties of query and *ad hoc* query capabilities shall include, but not be limited to:

- Inquiry screens that are easily accessible by end users with a single keystroke
- Inquiry design based on selectable fields
- Availability to query all fields in the database
- Ability for authorized users to create *ad hoc* queries
- Ability to create queries using fuzzy logic
- Ability to query on multiple fields and/or partial fields
- Ability to use Query By Example (QBE)
- Ability of being saved by the user who created them and to save them for future use by the author and, optionally, authorized users
- Ability to schedule queries to automatically run at specified times
- Ability to report the results of queries as text reports and/or as graphical reports
- Ability to export query results to MS Word and/or MS Excel
- Ability to route query results to Fax queues

3.16.2 Electronic Data Deliverables (EDD)

The SBCSD-SID sends information, results and management statistics to other organizations and databases including, but not limited to, the SBCSD CAD/RMS system, the California State Department of Motor Vehicles system, the District Attorney's STAR system, the National Forensic Laboratory Information System (NFLIS), the and DEA. Currently, most of these reports are manually generated and faxed.

The LIMS shall be pre-configured with the capability to create and receive EDDs in accordance with compliance standards including, but not limited to, Justice Extensible Markup Language (JXML).

The LIMS shall provide the ability to create, accept, and parse ASCII files; comma delimited, tab delimited, fixed field width.

When electronic files are received remotely from a submitter, the LIMS must acknowledge receipt of each file to the submitter. The LIMS must also notify the submitter of any noted problems during transmission. All means necessary to reasonably preclude the addition of duplicate records containing case demographics, suspects, witnesses and the like shall be taken/facilitated in such transfers.

The LIMS shall take into account data transfer issues associated with transferring data to the aforementioned organizations and programs. The EDDs must adhere to standardized formats such as JXML. Data protocols shall use standard formats such as Extensible Markup Language (XML) wherever possible.

Additionally, the LIMS shall be pre-configured to create and receive EDDs for instrumentation and other programs. The LIMS shall accept/create EDDs in a variety of formats that include HTML, XLS, PDF, DOC, txt, etc. The EDDs shall not require a proprietary language for definition or creation.

The LIMS vendor shall specify whether the LIMS will manage the EDD generation via internal LIMS functions or through an external application. If an external application is required, the LIMS vendor shall identify the specific software product proposed to satisfy this requirement and shall also price separately associated costs pertaining to the software. The LIMS vendor shall address these matters and explain how the mechanism for EDD generation and delivery will function.

3.16.3 Standards and Reagents

Primary or stock standards and reagents may be received pre-mixed from vendors, while other times they are made by examiners using raw (neat) constituents. Examiner's record information such as lot number, constituents, expiration date, received by, received date, created by, created date, and concentration upon receipt or creation of various standards on a worksheet. As standards are used to create secondary and working standards, additional information is recorded such as dilution volumes, concentrations, expiration dates, creation date, examiners, etc. All of the chemical standards and reagent information shall be maintained

in the LIMS. The LIMS shall also provide the ability to track all standards and reagents from vendor receipt/creation to expiration or depletion, including all interactions between the two.

Usually Primary or Stock Standards are received pre-mixed from vendors, while at other times they are made by examiners using pure chemical constituents or simple solutions. The LIMS shall provide capability for examiners to record information such as lot number, constituents, expiration date, received by, received date, created by, created date, and concentration, upon receipt or creation of various standards. As standards are used to create secondary and working standards, the LIMS shall provide the ability to add information such as dilution volumes, concentrations, expiration dates, creation date, and examiners, etc. The LIMS shall provide for the optional association of reagent lots to the QC batch for the purpose of NIST traceability. Information about standards used in creating QC evidence shall be used by the LIMS to calculate QC results. The LIMS shall track expiration of reagent lots and validations and shall warn laboratory personnel who attempt to use expired or out-of-validation reagents or standards.

3.16.4 Chemical, Reagent, Kit and Supply Inventory

The LIMS shall provide functionality to maintain an inventory of chemicals and supplies in each Section or Unit. The information to be accepted by the LIMS shall include chemical name, description, quantity, container type, supplier, lot number, expiration date, storage area, and verification of receipt of the MSDS. The LIMS shall be able to clearly distinguish between chemicals, kits and other supplies. The LIMS shall be able to print out a hardcopy of these records and provide a hypertext link to MSDS information on the chemical manufacturer's website or a file on the SBCSD-SID network. The LIMS shall provide the capability to limit access to the inventory data.

The LIMS shall track the inventory of all chemicals and other supplies in each laboratory, from receipt area through disposal or consumption. The LIMS shall provide the ability to add new types or categories to the inventory and to add new lot numbers to existing inventory types. The LIMS shall maintain information about the number of each item in each laboratory area and/or each storage area in the laboratory. The information recorded in the LIMS regarding inventory shall be placed into a "history" so that SBCSD-SID personnel can calculate usage rates over a period of time. The LIMS shall allow designated users to query the database using date ranges to calculate usage rates for the last year, two years, three years, etc.

Once initial entry of a supply item has been accomplished, the LIMS shall allow an authorized user to decrement the quantity of an inventory item by simply scanning the bar code of that item. While in the inventory interface screen, scanning the bar code number shall bring up the records for that specific item.

If inventory levels fall below a minimum designated threshold (to be determined on an item-by-item basis), the LIMS shall generate a Request for Purchase, including all ordering information, indicating more stock of said material must be ordered. The LIMS shall route the Request for Purchase to designated personnel who would then be able to electronically approve the request and forward it to additional personnel, whose approval is required. The LIMS shall facilitate entry of approved orders into the SBCSD Financial Management System.

In cases where a chemical or other supply is used sparingly and only one container is kept in current laboratory stock, the LIMS shall provide a place for the user to manually generate an order notification. The order shall be automatically sent to appropriate personnel, similarly to when a minimal threshold is reached.

Additionally, the LIMS shall allow approved personnel the ability to record depletion/disposal information of empty chemical containers. Information recorded for empty containers includes, but is not limited to: LIMS-assigned chemical inventory number, date/time depleted, depleted by, disposal method, and disposal location.

The LIMS shall manage inventories of evidence collection kits. The LIMS shall assign lot numbers and, optionally, expiration dates, for evidence kits assembled and reagents created by SBCSD-SID. The LIMS shall track inventory at the lot number level to ensure older stock is consumed before newer items are issued. The LIMS shall be able to query item stock quantities by storage location, item ID, and other criteria.

3.17 Ancillary Laboratory Support Functions

The items contained in this section shall be provided in addition to the workflow support items. SBCSD-SID may or may not use the functions requested in the following sections, dependent upon departmental decisions. Therefore, the capability for the requested functionality shall exist without requiring mandatory use by all LIMS users or sections/units.

3.17.1 Asset Management

SBCSD-SID maintains a list of all instrumentation and other assets it currently has throughout the laboratory. The information recorded includes, but is not limited to, manufacturer, model number, serial number, date purchased, date installed, date discarded, etc.

The LIMS shall provide functionality to accept asset information and store it in the System. Information to be stored and tracked in the LIMS shall include information listed previously. The LIMS shall allow the user to query the system to readily determine assets on hand and other status information, including but not limited to: manufacturer, model number, serial number, date purchased, date installed, price paid, etc.

3.17.2 Proficiency Testing and Training Requirements

The LIMS shall assist SBCSD-SID in meeting regulatory requirements to participate in PT programs. This shall include: tracking the status of PT evidence (e.g., in-progress, results reported), PT number, person assigned to, due, date, analyte and type of test. In addition the LIMS shall facilitate incorporating PT items into the workflow, recording PT item results, recording who examined the PT item, and recording PT scores.

The LIMS shall provide a means to track employee training and competency. The LIMS shall provide a means to track an employee's authorization for performing specific examinations. The LIMS shall provide advance warning when a person's authorization to perform specific

examinations is about to expire. The LIMS shall generate an e-mail to a person's supervisor if they perform an examination for which they are not authorized.

3.18 External Application Interaction

The LIMS shall be capable of interaction with programs such as are listed below for external use of system information.

- Microsoft Office
- Screen capture from other applications including web browsers
- Reporting
 - Crystal Reports
 - Microsoft Access
 - Microsoft SQL Server
- Ask Sam
- More Hits

The LIMS shall generate reports and provide other information in a format deliverable via SBCSD-SID servers. Additionally, the LIMS shall be capable of supplying and/or receiving data via ODBC connections and in XML format.

3.19 Billing and Purchasing

The LIMS shall be capable of storing basic information in regard to billing external, or transfer costing internal, agencies as well as tracking basic cost data associated with the following operations:

- Evidence Kit Creation
- Routine Supply Provisioning and Distribution
- Reagent and Standard Use
- Examination Billing
- Storage Billing

Associated billing and purchasing data shall include vendor/consumer demographics and be available for EDD generation and triggering by batch or event to update related financial programs.

4. General System Requirements

This section identifies requirements or constraints that apply to the entire Laboratory Enterprise System, herein referred to as the "LIMS". The LIMS includes any and all software delivered as a whole or as component parts of the proposed system.

4.1 *LIMS Design*

The primary design of the delivered LIMS shall be capable of supporting simultaneous users without degradation of LIMS performance as users are incrementally added. The delivered LIMS shall support a minimum of fifty (50) concurrent users through the system infrastructure. Additionally, the LIMS shall support users external to SBCSD-SID. The proposal shall include any licensing options that are available and will support the required number of users. The term "user" is defined for purposes of this proposal and any ensuing contract as laboratory personnel actively addressing the main LIMS application. The reference to "users" with regards to licensing shall not include instrument interfaces, persons accessing finished data, or peripheral devices.

All components of the delivered LIMS shall be fully 32-bit compatible with Microsoft Windows NT or 2000. The delivered LIMS shall have an open architecture so that SBCSD-SID personnel or their delegates may make modifications and enhancements to the LIMS as their business requirements change. The delivered LIMS shall be based on industry-standard, commercially available components and tools. The use of proprietary tools and components will not be considered. The user interface screens and code shall be modifiable by SBCSD-SID or IT personnel with commonly available editing tools.

4.1.1 Laboratory IS Compatibility

All LIMS network applications shall support Transmission Control Protocol/Internet Protocol (TCP/IP) standards.

4.2 *System Security*

The delivered LIMS shall provide security to protect the integrity of the data. The security measures shall be compatible with Windows networking, Internet Explorer, SQL Server, and Windows Active Directory. The levels of security are described in the following sections.

4.2.1 Central Database Security

The delivered LIMS shall provide configurable security for the central database. Any method of accessing the central database, whether through the LIMS application or external programs, shall require a login identifier and password. This security shall provide read-only, limited editing and full access to the database and be configurable as to types of access granted to all objects within the central database.

4.2.2 LIMS Application Security

The delivered LIMS application shall provide configurable security for all users of the application. Each user shall gain access to the application through the use of a login and password. Based upon the user's information, the delivered LIMS shall control which menus, screens, and functions within screens are available to that specific user. User security shall be configurable by SBCSD-SID LIMS administrative personnel.

4.2.3 Server Resources Security

The delivered LIMS shall include configurable security for access to network resources such as printers, directories, and files. The delivered LIMS shall make use of the Windows 2000 / XP security paradigm for access to server resources.

4.2.4 Internet Access Security

The delivered LIMS shall be capable of access via the Internet. Access via the Internet must include appropriate security through firewall and virtual private network technology. The purchase and installation of the necessary infrastructure to provide the level of required security is the responsibility of SBCSD-SID.

4.3 External Application Interaction

The delivered LIMS shall be capable of interacting with Microsoft Office programs such as Word, Excel, and Access, for external use of system information. The LIMS shall generate reports and other information in a format deliverable via SBCSD web servers and will be integrated with other SBCSD enterprise applications including but not limited to CNI/JIMS, AFIS, and Central Mugshot Repository for supplying and/or receiving data.

The proposer shall discuss their experience integrating systems such as those listed above. Pricing for these interfaces shall be listed as Options that SBCSD-SID may or may not exercise. Proposers shall individually price each interface described above.

4.4 *Electronic Data Deliverables*

SBCSD-SID submits electronic data files to County, State and Federal offices. The delivered LIMS shall be pre-configured to accept EDDs from program databases and use the information to update the LIMS database. The delivered LIMS shall also be pre-configured with all the fields needed to create EDDs that will *directly* feed into the other programs listed in the previous paragraph and contained in Appendix VI. While these fields are required to be available in the LIMS database, they shall not be mandatory to complete throughput of samples and sample data. The proposer shall price, individually, each deliverable that is to be created in order to feed and receive data from each of the program databases directly.

Additionally, the delivered LIMS shall be pre-configured to create and receive EDDs for instrumentation, hand held Personal Digital Assistant (PDAs), and other programs. If the LIMS does not have the capability of generating EDDs internally, it shall be able to import/export data to an external resource for EDD preparation. Any data that are available on hardcopy reports may be required on the EDDs. It shall also be possible to manually enter data for EDD submittal that is not tracked by the LIMS. It is incumbent on the LIMS provider to address these matters and explain how a mechanism for EDD generation and delivery will function to accomplish these requirements.

4.5 *LIMS Documentation*

The vendor shall deliver all documentation required for correct operation and maintenance of all components of the proposed LIMS.

4.5.1 Specifications

The proposal shall include pricing for documentation of the LIMS design. This documentation shall include a design specification detailing system functionality as well as the design of the central database including work/data flow diagrams and entity relationship diagrams.

4.5.2 System Manuals

The proposal shall include four hard copies and one electronic copy of current functional user and system administration manuals.

4.5.3 Source Code

Delivery of the LIMS shall include delivery of all source code for the user interface and database access as well as any auxiliary programs integrated into the LIMS. This working copy of the delivered LIMS source code shall be placed in an escrow account (to be mutually agreed upon), in the event of vendor default or loss of vendor business viability. The vendor shall provide a list of recommended software for continued expansion of the LIMS.

4.5.4 Help Documentation

In addition to the design specification, the delivered LIMS shall include access to a context-sensitive Help System that provides specific information about each screen of the application. The help information for each screen shall describe the function or purpose of each user entry field and identify the range or syntax of permitted values.

4.6 *User Interface*

In concert with the design specification, the proposer shall provide examples of the user interface to demonstrate methodology and style of the screens. The examples do not have to include all screens in the LIMS, but a representative sample of the different screen paradigms to be used.

4.7 *Report Formats*

The proposal shall provide examples of the management reports that will be provided with the LIMS.

4.8 *LIMS Administration*

The proposal shall identify all tools and third- party software necessary for proper administration of the delivered LIMS. These tools shall cover management and administration of the LIMS database, the user interface, and any auxiliary programs integrated into the LIMS. The LIMS shall not rely on proprietary technology or components for routine maintenance.

Delivery of the LIMS shall include delivery of all source code for database development and the user interface as well as any auxiliary programs integrated into the LIMS.

4.9 *LIMS Warranty and Support*

The proposal shall define the boundaries of the LIMS Warranty and Support.

4.9.1 Warranty

At a minimum, the LIMS shall be warranted against deficiencies in functionality as defined in this document) and defects in operation for a period of one year from the date of LIMS acceptance by SBCSD. The proposal shall include pricing for extending the warranty beyond the initial year in the form of a yearly maintenance agreement. In addition to LIMS warranty, the proposal shall include pricing for Software Assurance to include, but not limited to, LIMS

upgrades in concert with upgrades by SBCSD-SID to the server operating system, server database program, and client operating systems as well as all other standard components integrated into the LIMS.

4.9.2 Technical Support

The proposal shall include pricing for all available options for varying levels of technical support. Terms for on-site support and travel expenses shall also be defined.

The proposal shall be capable of providing technical support through one or more of the following means:

- On-Site Support
- Virtual Private Network (VPN)
- Telephone Support (Indicate days and hours of availability)
- Email Support
- File Transfer Protocol (FTP) Support

4.9.3 Implementation Assistance

The proposal shall include pricing for one (1) year of full-time, on-site technical support to assist with the LIMS implementation. Implementation assistance shall be proposed as an optional item.

5. Data Processing Environment

The delivered LIMS shall operate within the data processing environment of SBCSD-SID.

5.1 *Operating Systems*

The proposer shall install the LIMS within an infrastructure that meets or exceeds the requirements identified by the vendor. The actual number of servers and their configurations shall be determined after the vendor has been selected. At a minimum, these servers shall be configured with MS Windows 2003 Server operating system. Currently SBCSD servers are running MS Windows 2003 Server. All client computers used as LIMS workstations are currently, or will be, configured with MS Windows 2000 SP4 or XP SP2.

5.2 *Web Server*

The proposer shall install the LIMS web server component on a server running a standard SBCSD operating system (see Section 5.1). The LIMS web server component shall utilize Microsoft Windows Internet Information Server (IIS).

5.3 *Web Browser*

The LIMS shall support Microsoft Internet Explorer (IE) for browser access. The LIMS shall support the most recent version of IE as well as earlier versions. The LIMS shall support other web browsers also.

5.4 *LIMS Data Storage*

The proposer shall install and the LIMS shall utilize a server-based central database to be located on the System server. The preferred database application is Microsoft SQL Server 2000 relational database that shall be capable of expansion and modification by SBCSD. The delivered LIMS shall allow multiple users to access the data simultaneously for data entry and retrieval without locking each other out. The proposer shall provide any necessary drivers for interaction between the user interface and the LIMS database. The central database shall be provided complete with tools for database management, archiving, and restoring from archive. The cost for these tools shall be included in the LIMS pricing in the proposal.

5.5 *WAN / LAN*

SBCSD-SID has computers that are linked in a Local Area Network (LAN) utilizing TCP/IP and Ethernet.

5.6 *Microsoft Windows*

Laboratory workstations shall use *Microsoft Windows XP (or newer)* operating systems and Microsoft Office Professional office automation products. The delivered LIMS shall support transfer of data between the LIMS and office automation products via Dynamic Data Exchange (DDE) or Object Linking and Embedding (OLE).

5.7 *Data Backup and Storage*

The delivered LIMS shall backup and archive all files to a suitable storage area network (SAN) and disaster recovery solution administered by SBCSD. This information shall be organized to facilitate retrieval of specific data. The delivered LIMS shall also include support for moving data from the active database to historical or archive databases. The central database shall be provided complete with tools for database management, archiving, and restoring from archive.

6. General Proposal Requirements

This section identifies requirements or constraints that apply to the entire SBCSD Enterprise LIMS. The LIMS includes any and all software, hardware and services delivered as a whole or as component parts of the proposed LIMS.

6.1 Additional Instructions to Proposers

Offerors must complete the source selection matrix form in accordance with the following instructions and column explanations.

- Column A: Requirement Number – Index number of requirement provided to assist identification of individual requirements.
Column B: Type of Requirement
Column C: Requirement – Description of specification.
Column D: RFP Section – Technical specification paragraph location within the RFP.
Column E: Code – Priority Code

MANDATORY (M)	- These requirements <i>must</i> be provided.
SHOULD HAVE (S)	- These requirements should be provided.
WANT (W)	- These requirements are desirable.
OPTIONAL (O)	- These requirements are important, however the Agency wishes to consider their cost separately from the other requirements.

Column F: Response Codes – ***All requirements and sub-requirements must be answered. Providing detail concerning how your product meets this requirement will enable the evaluation committee to best evaluate your product's capabilities.*** If the Offeror does not address the requirement, a "does not comply" response will be assumed for evaluation purposes:

- If the function is fully provided as described in the RFP, and does not require customization to your existing product (as of the date of the proposal), respond **"YES"** in the *Provided* column.
- If you believe that you substantially meet the requirement, or do so in a way that appears to be different than the RFP descriptive statement, answer **"YES/CLARIFY"**, then explain the difference in the *Comments* block.
- If you do not provide the function but propose to provide it in a future release, or deliver it as a customization/enhancement, answer, **"ALTERNATE"** and describe fully in the *Comments* block the scope of the customization/enhancement including all dependencies and a proposed release date. If you take exception to a requirement, state the exception, its reason, and propose an alternative solution
- Answer **"NO"** if you will not provide a requirement.

Column G: Reference: – Write the location (Binder/Section/Page Number) of the discussion of the specification in the Offeror's proposal.

Column H: Offeror's Comments

"YES/CLARIFY" and "ALTERNATE" responses will be assessed by the Evaluation Committee to determine their fit to the requirement. "YES/CLARIFY" and "ALTERNATE" responses which are determined to not meet the requirement will result in the requirement being scored as if the Offeror responded "No" and if the requirement is mandatory may result in the Offeror's proposal being rejected.

The "Base System" means all of the mandatory requirements as defined in this RFP, which includes all mandatory items in the Requirements Matrix and: all other items in the requirements matrices to which the Offeror responds "Yes", "Yes/Clarify" or "Alternate"; all other items included in a Best and Final Offer; and all other items which are agreed to during contract negotiations.

Keep in mind that APPENDIX III is only a summary list of requirements. Interpretation of the vendor's fulfillment of the specific requirements of this RFP will be determined by the requirements set forth in this entire RFP and all associated requirements, not the Source Selection Matrix

SBCSD-SID assumes that unless otherwise stated, all of the requirements in Appendix III will be delivered turnkey. Shall a functionality requirement identified in this RFP be proposed as "not to be provided turn-key", the vendor shall so state in the "Comments" section of Appendix III for the requirement. If required functionality cannot (or will not) be provided by the proposer, the vendor shall provide an estimate of the resources required for SBCSD-SID to organically develop the functionality or to have the unsupported work contracted to another vendor / integrator.

6.2 Year 2000 Compliance

The LIMS and all components thereof must be fully compliant with Year 2000 requirements.

6.3 Desired LIMS Completion Date

Upon award and the subsequent issuance of a purchase order, the LIMS shall be installed and fully functioning within nine months of contract award. Submittals shall include a schedule, with measurable benchmarks, for the completion of the various tasks associated with this project and assuming a November/December **2007** award date.

6.4 Cost

All submitted cost proposals shall address the issues mentioned in this document and clearly state the features that will not be included in the base bid price. Any deficiencies or alternative strategies for fulfilling the requirements of the LIMS outlined in this document shall be addressed. **Unless stated to the contrary, it will be assumed that the features identified in the cost proposal (VII) are included and shall be provided at no additional cost to SBCSD-SID.** Total costs shall be expressed both numerically and in written form in the appropriate location on the bid form (**Appendix VI**). All proposals become the property of SBCSD upon submission and will not be returned.

6.4.1 Cost of Maintenance

The proposal shall include a discussion of any service contract options offered by the proposer. The costs for a maintenance contract, as well as what is and is not provided, may be considered as part of the submittal evaluation process.

6.4.2 Cost of Improvements/Changes

Customized improvements or changes to the LIMS may be required at the outset or at sometime in the future. The proposal shall include a cost per hour charge, and number of hours required for these services, and a discussion on how such situations will be handled.

6.4.3 Warranties/Guarantees

Submittals shall include a discussion of any warranties or guarantees that are applicable to the offered products and services, which will be considered as part of the submittal evaluation process. SBCSD-SID requires all proposed LIMS be provided with a 12 month warranty (starting from the completion of end-user training) and shall be priced accordingly.

6.4.4 Confidentiality

This RFP contains information considered proprietary to the operation of SBCSD-SID LIMS. The contents of this proposal shall be maintained in strict confidence by the receiving proposer.

6.4.5 Licensing

SBCSD-SID prefers a LIMS proposer to provide a site license as opposed to a per seat / users license. The site license shall include laboratory personnel actively accessing the main LIMS application as well as users external the SBCSD. SBCSD anticipates 50 concurrent SBCSD SID users accessing the main LIMS functionality. SBCSD further anticipates 150 concurrent users submitting form data, querying data, and utilizing report functionality. If your firm does not offer site licensing, the proposal shall discuss the various cost approaches (licenses) offered and list the least expensive one year option available on the cost proposal form (Appendix VI).

7. Performance

Submitted proposals shall discuss how the LIMS will address the specific needs of the SBCSD enterprise (and applicable supporting and supported SBCSD organizations) that are outlined in this document, in addition to any other LIMS features that are proposed by the Vendor. Omissions regarding features, performance, and/or functionality that are stated in the RFP and not otherwise addressed shall be the responsibility of the LIMS vendor.

7.1 Installation

The proposal shall include a pre-install owner checklist that covers hardware, software and staffing levels that SBCSD-SID must provide.

The selected LIMS vendor or their designated representative shall perform the initial installation of the LIMS including configuration, data conversion and customization tasks. Data conversion and customization tasks shall be separately priced. Proposers shall provide, as part of their proposal, a path or sequence of events, including a timetable, for the completion of this effort. This discussion shall address the various worksheets, reporting formats, and other customized documentation required by the laboratory. If the installation process is separate from the LIMS software in the bid, a recommended path for completion of the installation process shall be included in any submitted proposal. The intent of SBCSD-SID is to procure a functioning LIMS with known features that is operational within nine months of contract award.

7.2 LIMS Training

The proposer shall provide LIMS user training in two phases. Training shall be provided to System Administration users at the time of initial installation, and end user training shall be provided at the time of the final installation. The proposer shall include a detailed discussion of how LIMS training is to be addressed. The discussion shall include a list of course titles, course abstracts, and a description of the target audience.

7.3 Training Documentation

The proposer shall provide one hard copy of current functional user and system administration training documentation as well as one hard copy of all current user documentation, if different, for each SBCSD individual designated as a system administrator. All training and user manuals/documentation will be returned to the proposer. For the delivered LIMS, all data entry fields in the user manual/documentation shall identify permitted data types, permitted ranges of variables, and relationships with other data.

Appendix I – Acronyms

AFIS	Automated Fingerprint Identification System
AKA	Also Known As
ASCII	American Standard Code for Information Interchange
ASCLD/LAB	American Society of Crime Laboratory Directors Laboratory Accreditation Board
ATF	Bureau of Alcohol, Tobacco, Firearms and Explosives
BA	Blood Alcohol
CAD	Computer Assisted (Aided) Dispatch
CAL-ID	California Identification
CAP	Corrective Action Plan
CAPS	California Automated Palm Print System
CAR	Corrective Action Report
CNI	Central Name Index
COC	Chain of Custody
CODIS	Combined DNA Index System
CR4	SBSD Release or Disposition form
CSI	Crime Scene Investigation
DEA	Drug Enforcement Administration
EDD	Electronic Data Deliverable
DA	District Attorney
DIMS	Digital Image Management System
DMS	Document Management System
DMV	Department of Motor Vehicles
DNA	Deoxyribose Nucleic Acid
DOS	Disk Operating System
EDS	Energy Dispersive Spectroscopy
FB	Forensic Biology
FTIR	Fourier Transform Infrared Spectroscopy
GALP	Good Automated Laboratory Practices
GC	Gas Chromatography
GIF	Graphics Interchange Format
GIS	Geographic Information System
GRF	General Request Form (commonly called a "pink sheet")
HPC	Handheld Personal Computer
ICOC	Internal Chain of Custody
ICOCS	Internal Chain of Custody Sheet (commonly called a "blue sheet")
ID	Identification
JPEG	Joint Photographic Experts Group
JXML	Justice Extensible Markup Language
LAS	Laboratory Automation Solutions
LEMS	Law Enforcement Medical Service Inc.
LIMS	Laboratory Information Management System
LR	Laboratory Request
LRB	Laboratory Request – Blood
LRN	Laboratory Request - Narcotics
MS	Microsoft

MSDS	Material Safety Data Sheet
NFLIS	National Forensic Laboratory Information System
NIST	National Institute of Standards and Technology
SBCSD	San Bernardino County Sheriff's Department
ODBC	Open Data Base Connectivity
P&E	Property and Evidence Section
PDF	Portable Document Format
PETS	Property and Evidence Tracking System
PPE	Personal Protective Equipment
QA	Quality Assurance
QAO	Quality Assurance Officer
QBE	Query by Example
QC	Quality Control
RFA	Request for Analysis (commonly called a green sheet")
RFID	Radio Frequency Identification
RMS	Records Management System
SAN	Storage Area network
SID	Scientific Investigations Division
SOP	Standard Operating Procedure
SQL	Structured Query Language
STR	Short Tandem Repeat
TAT	Turn-Around-Time
TP	Ten Print
TSD	Technical Services Division
XML	Extensible Markup Language

Appendix II – Instrument Interface List

Type	Vendor/Model	Lab Section	Software	Bi-directional
GC	HP 5890	Alcohol	N/A	Yes
GC	Agilent 6890N	Alcohol	N/A	Yes
GC	HP 5890	Trace – Arson	N/A	Yes
GC/MS	HP 5890	Controlled Substances	ChemStation	Yes
GC/MS	HP 6890	Controlled Substances	ChemStation	Yes
GC/MS	Agilent 6890N	Trace – Arson	ChemStation	Yes
UV/Vis	HP 8453	Controlled Substances	N/A	No
FT-IR	Nicolet Avatar 360	Trace		No
SEM-EDS	ASPEX	Trace	N/A	No
Balance	Sauter RE1614	Alcohol	N/A	No
Balance	Sci Pro 20210	Controlled Substances	N/A	No
Balance	AND FX3200	Controlled Substances	N/A	No
Balance	Denver Instruments XS-410	Controlled Substances	N/A	No
Balance	Fisher XT3KD	Controlled Substances	N/A	No
Balance	Ohaus	Controlled Substances	N/A	No
Balance	Ohaus	Controlled Substances	N/A	No
Balance	Sartorius BA61	Controlled Substances	N/A	No
Balance	Sartorius B310P	Controlled Substances	N/A	No
Balance	Denver Instruments XS-410	Controlled Substances	NA	No
Balance	Ohaus DS202	Controlled Substances	N/A	No
Balance	Sartorius 1507	Controlled Substances	N/A	No
Balance	AND EK400H	Controlled Substance	N/A	No
Balance	AND EK400H	Controlled Substance	N/A	No
Balance	AND EK400H	Controlled Substance	N/A	No
Balance	Denver Instruments	Trace	N/A	No
Balance	AND EK400H	Controlled Substance	N/A	No
Balance	Mettler PM300	For Bio	N/A	No
Balance	Mettler H20-5	For Bio	N/A	No

CE	ABI	DNA	Macintosh	Yes
CE	ABI	DNA	Macintosh	Yes
CE	ABI	DNA	Macintosh	Yes
CE	ABI	DNA	Macintosh	Yes
CE	ABI	DNA	Macintosh	Yes
RT PCR	ABI	DNA	Macintosh	No
Data Analysis	ABI	DNA	N/A	Yes
Data Analysis	ABI	DNA	N/A	Yes
Data Analysis	ABI	DNA	N/A	Yes

Appendix III - LIMS Vendor Demo Script

1. Company Background (30 minutes)

- a. Briefly discuss how/when your company was started, its past products and services, and the evolution of the product that will be demonstrated.
- b. Briefly discuss corporate accomplishments, in general, and specifically to the product you will be demonstrating, and the features of your product that differentiate your LIMS from your competitors.
- c. Briefly discuss any significant implementation successes and your company's ability to successfully implement the required LIMS within six months of contract award.

2. Case / Evidence Receiving

- a. At a high-level describe the life cycle of a forensic case.
- b. Receive a forensic case with the following items of evidence: a threatening note and a handwriting exemplar and fingerprint card for suspect John Doe, a biological sample for DNA analysis, a DNA exemplar from the suspect, and a pair of pliers retrieved from the suspect's house.
- c. Create or describe the creation of a barcode or RFID tag identifying an item of evidence (or sample) that is seized or obtained by the detective.
- d. Discuss how the LIMS maintains chains of custody for evidence.
- e. Receive a second case consisting of three bullets recovered at a crime scene and two guns seized from a suspect.
- f. Discuss options for applying data entry rules to prevent errors. Discuss options for using existing "submitting field office and/or agency codes" in parallel with full-text field office and/or agency names during evidence receiving. Show how this information can be added to or modified.
- g. Show or describe options for receiving multiple similar items (e.g. a six-pack of beer) for alcohol content measurement.

3. Case Assignment and Evidence Management

- a. Notify supervisor of evidence receipt (from steps 2.a and 2.e) and show how a supervisor assigns responsibility to an analyst. Also show where it is placed into a storage room or evidence vault until analysis can be started.
- b. Assign responsibility for each item from step 2.a to different analysts and transfer custody from the evidence technician to those analysts.

- c. Demonstrate how the system will link samples with digital images of their associated formula.
- d. Discuss options for uploading electronic files containing case information for submitted evidence.
- e. Transfer the items from storage (step 2.a) to an analyst.
- f. Assign and transfer all items from step 2.e to an analyst.
- g. Create a sub-exhibit from the DNA evidence described in step 2.a.

4. Data/Information Entry

- a. Manually enter an analytical test result for the sub-exhibit created in step 3.g.
- b. Demonstrate use of business rules to prevent erroneous data entry (e.g., warn the analyst when a caliber less than .22 is being entered.)
- c. Modify a previously entered analytical test result from step 4.a and discuss audit trail information.
- d. Add a new test for the item from step 4.a.

5. Instrument Interface

- a. Simulate an interfaced instrument by automatically uploading a text or other file to post an analytical test result.
- b. Discuss or demonstrate how the LIMS handles QC data from repeated QC samples.
- c. Discuss or demonstrate how the LIMS handles data from repeated or confirmatory analyses in multiple runs in terms of which data is posted.

6. QA/QC

- a. Demonstrate how LIMS data is used to create a statistical process control chart for quality control data from an analytical method.
- b. Demonstrate how the LIMS notifies an examiner when a reagent or control is out of date (expired).
- c. Demonstrate how the LIMS notifies an examiner when an instrument such as a thermometer or balance is out of calibration.
- d. Update the calibration date in the LIMS and demonstrate that the instrument can be used.

7. Reports

- a. Print a result report containing all results for the sample in 5b.
- b. Prepare an ad hoc or "quick" report based on user search conditions such as date, analyte, measurement results, or out-of-range results.

- c. Demonstrate or discuss automatically generated reports for an out-of-range value.
- d. Change the signature block on the report.
- e. Discuss how e-reporting would work using examples of samples previously logged in
- f. Export data to an Excel spreadsheet.

8. Audit Trail

- a. Generate an audit trail report for sample 7c that has been modified.
- b. Discuss how original and modified data records are stored.
- c. Discuss how reported data is linked to previous modified records for that sample.

Appendix IV – Source Selection Matrix

ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
1.	4	The proposal shall identify hardware and infrastructure requirements to support the laboratory enterprise.	1.2	M			
2.	4	The proposer shall submit six hardcopies printed on recycled paper (see Appendix VIII, Section I.A.16) and 1 electronic copy (<i>Microsoft Word and Excel</i> , are acceptable) of their proposal ...	1.3	M			
3.	4	The vendor's understanding of the project as demonstrated by their proposed project approach, broken down by tasks and subtasks	1.3(1.c.)	M			
4.	4	A schedule identifying each task/subtask (see item c above) estimating the time necessary to complete the proposed scope of services within nine (9) month	1.3(1.d.)	M			
5.	3	Description of the implementation team, including names, classifications and qualifications of key personnel and sub contractors and an organization chart showing how the team will work together	1.3(1.e.)	M			
6.	4	A table showing the estimated staff hours for all SBCSD and Vendor personnel assigned per task based on the vendor's understanding the project scope of work	1.3(1.f.)	M			
7.	3	The proposal shall include references from at least five relevant contracts within the past three years. References shall be from previous or current projects that are similar to the work under this requirement, preferably in ASCLD/LAB accredited forensic laboratories	1.3(2.)	M			

¹Type: 1 = Features, Functions, & Capabilities; 2 = System Design; 3 = Vendor Qualifications; 4 = Bid Requirements; 5 = Support

²Code: M = Mandatory; S = Should Have; W = Want

ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
8.	3	The proposal shall describe the proposed Project Management approach and explain how the approach will ensure timely accomplishment of SBCSD-SID requirements.	1.3(3.)	M			
9.	3	The proposal shall include resumes and intended roles for personnel proposed for the project with sufficient detail to enable the evaluation team to determine their qualifications for the proposed work.	1.3(3.)	M			
10.	3	The proposer shall indicate each proposed individual's percentage of time available to work on SBCSD-SID project from the time of contract award until the installed LIMS has been fully implemented.	1.3(3.)	M			
11.	3	The proposal shall identify an individual who shall serve as the primary point of contact for the contract. (See Appendix VIII, Section I.A.2)	1.3(3.)	M			
12.	4	The proposal shall include a statement agreeing to submit within one week the required biographical and fingerprint information for each person who shall be engaged in performing any part of the installation.	1.3(4.)	M			
13.	3	The proposer shall provide information about their business organization and their company's ability to provide the complete LIMS solution	1.3(5.)	M			
14.	3	The proposal shall include information concerning the size of proposer's company, including a numerical breakdown of staff in the areas of development, implementation and technical support for the proposed LIMS.	1.3(5.)	M			
15.	3	The proposer shall provide information concerning general annual revenues and other related financial data	1.3(5.)	S			
16.	4	The proposal shall include a fee/pricing proposal to perform the described work.	1.3(6.)	M			

¹Type: 1 = Features, Functions, & Capabilities; 2 = System Design; 3 = Vendor Qualifications; 4 = Bid Requirements; 5 = Support

²Code: M = Mandatory; S = Should Have; W = Want

ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
17.	4	A completed "Statement Certifying Insurance Coverage" certifying that the required insurance coverage can be obtained by the Vendor and that the Vendor understands said coverage is a prerequisite for entering into a contract with San Bernardino County for the LIMS Procurement.	1.3(7.)	M			
18.	1	The LIMS shall support all SBCSD-SID functions described in this section	2	M			
19.	4	Vendors shall propose complete solutions to each requirement and identify any functionality that is being provided by any software that is not part of the vendor's LIMS product	3	M			
20.	4	If specialized hardware is required ... the vendor shall identify the type of hardware required and identify one or more models of hardware the vendor has used to successfully provide the required functionality.	3	M			
21.	1	The LIMS shall support the SBCSD-SID in meeting the requirements of regulatory agencies with which SBCSD-SID must comply, e.g., ASCLD/LAB, ISO17025	3.1	M			
22.	1	The LIMS shall create an electronic case file to manage all work and information regarding submitted evidence.	3.1.1	M			
23.	1	The laboratory case file shall be linked to the incident (complaint) number identified in the laboratory request.	3.1.1	M			
24.	2	LIMS shall be capable of recognizing multiple incident numbers for any laboratory case	3.1.1	M			
25.	1	When an item is received in the laboratory the LIMS shall search for and notify the evidence clerk if a laboratory case has previously been created related to the incident number.	3.1.1	M			

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²Code: M = Mandatory; S = Should Have; W = Want

ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
26.	1	If there is an existing laboratory case, the LIMS shall add the evidence to the existing case.	3.1.1	W			
27.	1	LIMS shall provide for the means to associate a case to one or more other cases and readily display such associations to the Examiner, Supervision and Customer.	3.1.1	M			
28.	1	The LIMS shall provide the means for an examiner, supervisor, or customer to see the progress of the items in the case	3.1.1	M			
29.	1	LIMS shall allow designated log-in personnel to manually create an electronic record for each evidence item received into SBCSD and then enter evidence demographic information contained on the Submission Form into the System	3.1.2	M			
30.	1	If the information contained on the Submission Form is available electronically, the LIMS shall automatically upload the relevant information and create an electronic evidence record.	3.1.2	W			
31.	1	The LIMS shall generate a unique alphanumeric identifier for each electronic evidence record created and shall allow SBCSD-SID to decide upon the format of the identifier.	3.1.2	M			
32.	1	LIMS shall allow the creation of an electronic case file that groups one or more submissions of evidence either at the time of evidence receipt or at any time in the analysis or post-analysis cycle	3.1.2	M			
33.	1	The LIMS shall allow cases consisting of one or more submissions of evidence including evidence collected or delivered on multiple days.	3.1.2	M			
34.	1	The electronic case file, at the minimum, shall be a means to associate all evidence submitted for an investigation under one unique identifier	3.1.2	M			

¹Type: 1 = Features, Functions, & Capabilities; 2 = System Design; 3 = Vendor Qualifications; 4 = Bid Requirements; 5 = Support

²Code: M = Mandatory; S = Should Have; W = Want

ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
35.	1	The LIMS shall track evidence using Internal Chain of Custody (ICOC) functionality able to withstand the scrutiny of the legal system and enable the laboratory to immediately locate ANY evidence or submitted item without exception, upon request, including detailed ICOC information.	3.1.3	M			
36.	1	The LIMS shall allow/require users to designate where an evidence item is stored.	3.1.3	M			
37.	1	The LIMS shall make use of integrated bar code technology to record ICOC information such as which laboratory section and/or person is in possession of a specific item of evidence, the date/time and users involved in transfers, and where the evidence is located within a storage location.	3.1.3	M			
38.	1	The LIMS shall track all transfers of custody within the LIMS database and shall enforce one-to-one evidence transfers between personnel by requiring the entry of a user ID and/or password of the party relinquishing the evidence, the ID numbers of evidence being transferred, and the user ID, and/or password of the party accepting the evidence.	3.1.3	M			
39.	1	The LIMS shall permit the transfer of evidence to a storage location when one-to-one transfers are not possible.	3.1.3	M			
40.	1	The LIMS shall allow the relinquishing party to pick a location as the receiving party.	3.1.3	M			
41.	1	The LIMS shall make use of the bar code technology to scan the item and a bar code representing the location it is being placed.	3.1.3	M			
42.	1	The LIMS shall also produce detailed ICOC history reports that contain the information described above.	3.1.3	M			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
43.	1	The LIMS shall produce work-lists (both on-screen and printable).	3.1.4	M			
44.	1	The LIMS shall produce individual priority assignment sheets.	3.1.4	M			
45.	1	The LIMS shall display information concerning the evidence in the LIMS in order for laboratory personnel to schedule work.	3.1.4	M			
46.	1	The LIMS shall be pre-configured to query the database by examination code/method, group of examination codes/methods, laboratory area, evidence type, submission/check-in number, case number, or incident number.	3.1.4	M			
47.	1	The creator of a query shall be able to store the query for re-execution.	3.1.4	M			
48.	1	The examiner shall be able to prioritize the workload by parameters such as remaining hold time, evidence collection date, special turnaround requests, priority, or by date received.	3.1.4	W			
49.	1	The work lists shall be easily configurable depending on the laboratory's requirements.	3.1.4	M			
50.	1	From the lists, Supervisors shall be able to assign examiners to specific cases or evidence.	3.1.4	M			
51.	1	Examiners shall be able to select evidence to be examined and generate QC batch worksheets (electronic and hardcopy)	3.1.4	M			
52.	1	The LIMS shall provide the QC batch work lists on-screen, in printable form, or as an Electronic Data Deliverable (EDD) to be able to be uploaded to laboratory instrumentation.	3.1.4	M			
53.	1	LIMS shall permit a supervisor to modify requested examinations for the purpose of addressing a specific question.	3.1.4	M			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
54.	2	Modifications/overrides shall be permission based and audit trailed.	3.1.4	S			
55.	1	Modifications and overrides shall cause automatic notification to the appropriate supervision that a modification has occurred.	3.1.4	W			
56.	1	The LIMS shall generate lists of all pending work according to the age of evidence, submitter, priority, charges, classification (e.g., repeat versus first-run), or turnaround requested, and allow the examiner and laboratory management to differentiate among these categories.	3.1.4	M			
57.	1	The on-screen display shall include a user-controlled filter to help define the format of the criteria of the listed evidence.	3.1.4	M			
58.	1	The LIMS shall be able to calculate remaining time in hours based on business rules, e.g., meeting the requirements of state penal codes for courts that are in session or closed at different times.	3.1.4	M			
59.	1	Flags for calculated remaining hours and/or days of short suspense times shall be available on all work-lists and the LIMS shall actively/automatically notify designated personnel when a specified threshold is reached.	3.1.4	M			
60.	1	The LIMS shall an authorized user to cancel pending or partial examinations of a case when a case is adjudicated.	3.1.4	W			
61.	1	When such changes are entered into the LIMS, the LIMS shall notify all analysts/examiners assigned to the case of the change either through a notification/alert system within the LIMS or as an e-mail message sent by the LIMS via the SBCSD e-mail system	3.1.4	W			
62.	1	The LIMS administrator shall be able to select and implement which processes require electronic signature	3.1.5.1	W			

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63.	1	When electronic signature is implemented, the LIMS shall require re-entry of the current user password to authenticate the user	3.1.5.1	M			
64.	1	The LIMS shall store the date, time, and identification of the authenticated user as part of the transaction	3.1.5.1	M			
65.	1	The LIMS shall accept and store a digitized representation of the signature and the electronic equivalent of the individual's handwritten initials of every user within SID	3.1.5.2	S			
66.	1	The LIMS shall be capable of applying a stored signature to any report based upon the identity of the individual approving the report after the appropriate authentication of the approving person	3.1.5.2	S			
67.	1	In conformance with the ASCLD/LAB, ISO 17025, GALP, and other quality guidance, the LIMS shall maintain audit trails of all activities pertaining to examiners, evidence identifiers and results	3.1.6	M			
68.	1	The LIMS shall track who entered information and/or report author and the date and time the event happened	3.1.6	M			
69.	2	The LIMS shall provide functionality such that a transaction log will record every transaction taking place on the LIMS	3.1.6	W			
70.	2	The transaction log shall be accessible only to authorized users	3.1.6	W			
71.	2	The transaction log shall not be editable	3.1.6	W			
72.	1	A "pop-up" box requesting reasons for changes shall be available but configurable as to whether it is mandatory	3.1.6	W			
73.	1	The LIMS shall print labels and worksheets with bar code representation of case/submission numbers and evidence numbers	3.1.7	M			

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74.	1	The LIMS shall allow for inexpensive scanners to read the bar codes	3.1.7	W			
75.	1	Bar codes scanners connected to LIMS PCs shall enter evidence identifiers into the LIMS application to search for evidence and process chain of custody transactions	3.1.7	M			
76.	1	Bar codes affixed to storage location shelves shall be scanned to identify evidence storage areas in the LIMS	3.1.7	M			
77.	1	Freezer and storage room inventories may use data loggers or other storage devices that shall upload tracked information on locations and tracked items to the LIMS	3.1.7	M			
78.	1	Labels with bar codes shall be produced automatically, or <i>ad hoc</i> , on demand by the end user, e.g., the capability shall exist to configure the number of labels needed in each receiving/check-in area	3.1.7	M			
79.	1	The capability shall exist to allow the printing of sequence numbers on labels to accommodate successive treatment or testing of the evidence	3.1.7	W			
80.	1	Within the context of inventories of reagents and chemicals, etc., the bar code shall be a representation of the item lot ID.	3.1.7	W			
81.	1	In some circumstances, inventory shall be uniquely labeled by individual container.	3.1.7	W			
82.	1	LIMS shall provide for the ability to designate inventories as separate and distinct from collections, e.g. Library Books, Reagent, Reference Weapons and the like	3.1.7	W			
83.	1	The LIMS shall generate bar code labels of various sizes, selectable by the user, with mixed text and bar codes, for use in evidence and batch identification and any other areas where bar code labels will enhance user productivity	3.1.7.1	M			

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84.	1	Use of bar codes shall encompass all aspects of COC and audit trail, both internal and external to the laboratory	3.1.7.1	M			
85.	1	The LIMS shall print bar code labels to dedicated printers based upon the log-in location of the user	3.1.7.1	W			
86.	1	The LIMS shall provide for the capability to restrict users to specific screens, as well as provide for automatic time outs	3.1.8	M			
87.	2	The LIMS shall allow these functions to be configured by SBCSD on a per user and per screen basis in addition to role based permissions	3.1.8	W			
88.	1	The LIMS shall manage secure access to completed examination reports by authorized persons	3.1.8	M			
89.	1	The LIMS shall allow read-only access to appropriately identified personnel from external agencies to only reports for evidence submitted by that agency	3.1.8	W			
90.	1	The LIMS shall allow read-only access to appropriately identified DA personnel to only reports for the geographic region assigned to that DA	3.1.8	W			
91.	1	The LIMS shall also be able to enforce routine change of password after a LIMS administrator-defined number of days	3.1.8	M			
92.	1	The LIMS system shall also be able to enforce basic definition of "valid passwords" rules	3.1.8	M			
93.	1	locking of user access after a LIMS administrator-defined number of failed log-ins	3.1.8	M			
94.	1	The LIMS shall record all failed login attempts including the user account (whether valid or not), date, time, and IP address and/or MAC address of the user PC	3.1.8	M			

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95.	1	The LIMS shall track the status of submissions from submission through reporting (and beyond when additional analysis or linking to future submissions is necessary)	3.1.9	M			
96.	1	The LIMS shall track complete submissions, individual evidence, preparation (where required), associated Quality Assurance (QA) activities and examinations	3.1.9	M			
97.	1	The LIMS shall accept log-in information to identify specific Laboratory Sections and Units that will analyze each evidence item	3.1.9	M			
98.	1	The LIMS shall generate complete Turn-Around-Time (TAT) reports for submissions, evidence, and examinations averaging available tracking data	3.1.9	M			
99.	1	Measurements of TAT shall provide an option to not include weekends and holidays	3.1.9	W			
100.	1	The LIMS shall include a query to identify the status of a specific evidence item in the scheduled work flow	3.1.9	M			
101.	1	The LIMS shall assign case, evidence, and analysis status values when evidence is received, logged and processed by the lab, similar to but not limited to the following: Received; In Testing; Examination Performed; Ready for Validation and/or Approval; Result Validated and/or Approved; Evidence Complete; Draft Report Written; Technical Review Complete; Administrative Review Complete; Case Complete; Reported (regardless of the reporting method): Final Report Sent; Supplemental Report Sent; Revised Report Sent; Evidence Archived; Evidence Returned, Destroyed, Sold	3.1.9	M			
102.	1	The LIMS shall allow the user to change the status of evidence or the system shall automatically change the status when a task is completed	3.1.9	M			

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103.	1	Whenever workflow management is being used within the context of tracking multiple steps within a particular section and/or groups of examinations, the LIMS shall allow the user to change the status of evidence or examination step, as appropriate	3.1.9	W			
104.	1	The LIMS user interface shall use workload/workflow status to drive "to-do" lists for individuals and/or groups participating in the workflow	3.1.9	W			
105.	1	The LIMS shall provide a communications interface between users, designated individually or by groups, which acknowledges receipt date and time of communication to the original sender and such messaging shall be retained as historical information applicable to the entity record of concern.	3.1.9	W			
106.	1	The LIMS shall provide an easy way to determine if all requested examinations have been completed so that the evidence can be assigned a disposition date	3.1.10	M			
107.	1	The LIMS shall assign a disposition date based on the type of evidence, the examinations performed, and/or the results of the examinations	3.1.10	S			
108.	1	Authorized LIMS users shall have the capability to edit or extend the disposition date with a full audit trail	3.1.10	S			
109.	1	The LIMS shall also generate a disposition list based on any defined parameter such as hold time, submitter/project, evidence completion status, etc	3.1.10	M			
110.	1	The LIMS shall enable SBCSD-SID to create shipping lists/COC for items being shipped to other locations outside the control of SBCSD	3.1.10	M			
111.	1	Minimally, the lists should include a uniquely identified manifest, the individual items in the package, the recipient and the date shipped	3.1.10	M			

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112.	1	For evidence that is retained, LIMS shall identify the storage location and all analytical results performed on that item	3.1.10	M			
113.	1	Examiners and evidence clerks shall be able to search the LIMS for archived evidence that meet specific criteria to identify the storage location	3.1.10	M			
114.	1	For items not marked in the LIMS for long-term retention the LIMS shall flag items that have been stored in excess of a time period that is settable by authorized SBCSD-SID personnel	3.1.10	M			
115.	1	The LIMS shall generate multiple standard or <i>ad hoc</i> management reports including performance statistics	3.1.11	M			
116.	1	These shall be able to be generated and optionally printed at any time	3.1.11	M			
117.	1	The system shall be flexible to allow reports to be generated based upon user-defined filter/sort criteria	3.1.11	S			
118.	1	The LIMS shall be able to Associate each examination performed by an externally assigned code number and by a unique examination identifier	3.1.11	M			
119.	1	The LIMS shall be able to Associate each provider of evidence by a code number and a unique provider identification number	3.1.11	W			
120.	1	The LIMS shall be able to Generate reports based on user-defined criteria and timelines	3.1.11	M			
121.	2	As a minimum, the LIMS shall support output to MS Word, Excel, Access, SQL Server, Adobe Acrobat, and Crystal Reports as programs for report generation	3.1.11	M			
122.	2	The LIMS shall also support output in XML format for reporting	3.1.11	M			
123.	4	The LIMS Vendor shall pre-configure a minimum of ten (10) management reports standard to most laboratory environments	3.1.11	M			

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124.	2	Trained SBCSD-SID users shall be able to modify any of the pre-configured management reports	3.1.11	M			
125.	2	The LIMS shall provide the means of designing multiple report formats to meet laboratory requirements	3.1.11	M			
126.	2	Authorized, trained users shall be able to create their own reports from pre-existing formats that have been established as routine	3.1.11	W			
127.	2	The LIMS shall include an integrated report writer to enable customizable reports to be generated by the SBCSD-SID without programming	3.1.11	M			
128.	1	If the LIMS uses Crystal Reports, or a similar product, to generate reports, then there shall be a toolbox to enable its application without requiring back-end access or programming	3.1.11	W			
129.	5	The vendor shall also ensure that SBCSD-SID receives the training required to create new integrated reports	3.1.11	M			
130.	1	The LIMS shall provide query capabilities for the database and input information such as submitter, examination method, case, external complaint or other agency reference), date range(s), Laboratory Section or Unit, evidence identifier range(s), and QC data, in a totally configurable format	3.1.11	M			
131.	1	The LIMS shall have the ability to automatically generate routine reports on a scheduled basis	3.1.11	S			
132.	1	Authorized SBCSD-SID users shall be able to designate the number and destination of the reports that are to be printed, e-mailed, posted to website, or faxed	3.1.11	M			
133.	1	The LIMS shall have the capability of sorting and grouping reports by at least submitter and case	3.1.11	M			
134.	1	The LIMS shall also have the ability to automatically generate and send a report when a triggered event occurs in the LIMS	3.1.11	W			

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135.	1	The LIMS shall provide reprint capability of any report while maintaining and reporting original print date and case and evidence demographics	3.1.11	M			
136.	1	If reports are saved in Portable Data Format (PDF), then the system shall not allow changes to these documents outside the system	3.1.11	S			
137.	1	The LIMS shall provide Document Management Services (DMS) through its own Document/Records Management Function or an integrated third-party application	3.2	S			
138.	1	All LIMS users, by default, shall view the most recent "released version" of a DMS-controlled document by clicking a button or other control on the user interface	3.2	W			
139.	1	The DMS component of the LIMS shall accept and manage documents such as Quality Manuals (QM), Standard Operating Procedures (SOPs), examination methods, worksheet templates, form templates, Material Safety Data Sheets (MSDS), Reagent Data Sheets, and Personal Protective Equipment (PPE) requirements	3.2	S			
140.	1	These documents shall be managed as "living" documents that shall be easily modified and expanded while maintaining a strict version control of every/any change, additions, deletions, etc., to include the dates, times, and details of anyone that modifies (including adding or deleting) any document within the LIMS DMS	3.2	S			
141.	1	All documents, whether static or under revision, shall remain accessible, i.e., readily retrievable, via search	3.2	W			
142.	1	The LIMS DMS shall capture both the content and identifying attributes of each document	3.2	S			
143.	1	The LIMS DMS shall securely store all versions of document files	3.2	W			
144.	1	When a new version of a document is created the LIMS DMS shall maintain the new document in a draft status	3.2	S			

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145.	1	During the development and approval period, the last released version shall continue to be the currently accessible version	3.2	W			
146.	1	When the draft document is approved, an authorized LIMS user shall release the new document via the DMS	3.2	S			
147.	1	The LIMS shall ensure the previous versions of the document are stored securely but available only to authorized LIMS users	3.2	S			
148.	1	The LIMS shall track specific versions of an examination method in effect at the time evidence is examined	3.2	S			
149.	1	Examinations shall remain referenced to the SOP version under which they are performed.	3.2	S			
150.	1	Regardless of how Document Management is provided, documents such as MSDS shall be accessible from inventory screens and LIMS input screens related to procedures that use that particular MSDS	3.2	W			
151.	1	The LIMS shall provide this link whether the MSDS are provided through an electronic subscription service, via a web interface, or as scanned documents	3.2	W			
152.	1	SOPs shall be accessible from LIMS input screens related to the standard procedure	3.2	M			
153.	1	The DMS function shall also manage electronic record files including reports, data files – including images – created by instruments, worksheets, scanned images of paper worksheets, submission forms, and graphical instrument output	3.2	W			
154.	1	Records related to specific submissions shall be accessible from LIMS screens related to the submission	3.2	W			
155.	1	Records related to specific evidence or examinations shall be accessible from LIMS screens related to the evidence or examination	3.2	W			

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156.	1	The LIMS shall accept an image file from a paper scanner in a LIMS specified format containing a single bar code label containing the submission/check-in number within the image and automatically associate the electronic file with the submission/evidence log-in	3.2	S			
157.	1	The LIMS shall also accept a digitally uploaded image file in a LIMS specified format and automatically associate the electronic file with the submission/evidence log-in	3.2	M			
158.	1	The DMS shall enable users to track the status of recurring reports to include, but not be limited to, information such as: the date each report was prepared, the dates it was submitted for signature, the date it was processed, resolution required, "action" dates, etc.	3.2	S			
159.	1	The LIMS shall provide hyperlinks to electronic documents	3.2	W			
160.	1	The LIMS shall print out a hardcopy of these documents and records at the user's discretion	3.2	W			
161.	1	The LIMS shall maintain a list of submitter codes assigned to different submitting organizations	3.3	M			
162.	1	The LIMS shall allow assignment of a unique customer code to each submitting organization	3.3	M			
163.	1	The LIMS shall provide for distinguishing between subsections of the parent submitting organization	3.3	W			
164.	1	The format of the code shall be selected by SBCSD-SID	3.3	W			
165.	1	The LIMS shall permit definition of multiple log-in screens (user interfaces) that are designed or organized to match the order of information on the forms used to submit evidence	3.3.1	W			

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166.	1	The LIMS shall permit use of submitter identification codes that will automatically populate the receiving screen	3.3.1	W			
167.	1	The LIMS shall permit the duplicate definition of a submitter if a different submitter code is assigned	3.3.1	W			
168.	1	The LIMS shall reduce the amount of manual information entry during evidence receiving/check-in by accepting electronic information from a variety of sources and formats, such as web-based Electronic Submissions	3.3.2	M			
169.	1	The LIMS shall accept manual entry to service customers that cannot use electronic submissions	3.3.2	M			
170.	1	The LIMS shall provide for organizations to submit evidence submission forms electronically to SBCSD-SID	3.3.2.1	M			
171.	1	Allowable mechanisms shall include allowing the customer to fill out and submit an interactive web form that SBCSD would make available from the SBCSD-SID web page for customers to use in documenting a submission	3.3.2.1	S			
172.	1	When the customer clicks the "submit" button, the web form shall automatically transfer the form contents to the LIMS where the information shall be held with a status similar to "Pending" until the evidence items are received at the laboratory	3.3.2.1	S			
173.	1	the customer shall be able to print or save to disk a copy of the information on the computer screen	3.3.2.1	S			
174.	1	The LIMS shall permit the efficient transfer of evidence demographics for submission by a standardized EDD or equivalent electronic format to include the means for test code translation	3.3.2.1	W			

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175.	1	When the submitter sends the completed form electronically, authorized LIMS users shall be able to save the form contents in a manner similar to the web-based interface information	3.3.2.1	W			
176.	1	When the SBCSD-SID receiving clerk enters the submitter information, the LIMS shall display the normal submission log-in screens containing the web-based submission information	3.3.2.1	W			
177.	1	LIMS shall permit this web-based form to retrieve information from the appropriate EDD or file mentioned above	3.3.2.1	W			
178.	1	The receiving clerk shall be able to make audited changes to any information on the LIMS screens	3.3.2.1	M			
179.	1	The LIMS shall provide capability to scan submission forms using optical character recognition scanning and also allow easy linking of the scanned submission with manually entered receiving information	3.3.2.1	W			
180.	1	The LIMS shall provide a streamlined, flexible method for receiving submitted evidence	3.4	M			
181.	1	The LIMS shall require minimal information entry before assigning a case identification number	3.4	M			
182.	1	After the identification number is assigned, the LIMS shall permit evidence log-in	3.4	M			
183.	1	During the evidence log-in process, evidence collection information contained on the submission form, as well as receipt information shall be accepted by the LIMS	3.4	M			
184.	1	The LIMS shall permit assignment to a laboratory area and examination assignment but shall also allow assignment at a later time	3.4	W			
185.	1	The LIMS shall provide functions that will reduce manual entry of information associated with receiving evidence	3.4	M			

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186.	1	For example, the LIMS shall provide the option of creating and using pick lists and other time saving approaches, such as project templates or profiles (for example; standard examinations conducted on a sexual assault kit), on receiving screens	3.4	W			
187.	1	The LIMS shall provide for movement through the entry screens to be consistent with the order of information provided on the submission forms	3.4	M			
188.	1	The LIMS shall provide "type-ahead" or auto-filter through list capability for manual data entry as well as all other entry fields in the LIMS	3.4	W			
189.	1	The LIMS shall assist in maintaining a high-level of accuracy by monitoring input for common errors and inconsistencies such as wrong examinations selected for the type of evidence submitted	3.4	M			
190.	1	The LIMS shall allow logical field entry rules to be set, e.g., prevent entering a future date as evidence received date (unless specifically required)	3.4	M			
191.	1	the LIMS shall flag extremely old dates, as defined by SBCSD-SID	3.4	M			
192.	1	The LIMS shall have a place for "comments" that are communicated throughout the System to authorized examiners, management, and end-users	3.4	M			
193.	1	The LIMS shall also allow for multiple levels of comments, definable by System Administrators	3.4	M			
194.	1	All comment fields shall allow for pre-configured, standardized comments (drop-down menu)	3.4	W			
195.	1	The LIMS shall allow receiving personnel to flag an evidence item, or groups of item, if any information on the submission form is unclear or causes conflict with normal processing procedures	3.4	M			

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196.	1	The LIMS shall automatically notify designated SBCSD-SID personnel when evidence is received that may be unsuitable for testing	3.4	W			
197.	1	The LIMS shall allow log-in personnel to add comments that follow the evidence throughout all statuses, if the evidence is thought to be hazardous or highly contaminated	3.4	M			
198.	1	Evidence flagged for this reason shall be presented by the LIMS noticeably differently from other evidence	3.4	M			
199.	1	For evidence that is submitted with unclear/conflicting submission forms or are flagged as "problems" for whatever reason, the LIMS shall be configured to automatically produce "problem letters" to be submitted to the originator of the evidence with an explanation of the problem and requirements (including due date) for problem resolution	3.4	M			
200.	1	The LIMS shall allow these "problems" to be selected from drop-down lists	3.4	M			
201.	1	The LIMS shall also maintain a tracking system to automatically alert laboratory personnel when problem evidence information has been received and/or if an assigned "action" date has passed	3.4	W			
202.	1	The first receiving step in the LIMS shall allow assignment of a case identifier and evidence identifiers to evidence received by the Evidence Control Room	3.4.1	M			
203.	1	The LIMS shall maintain a distinct, sequential evidence numbering system and permit the laboratory to assign the alphanumeric pattern	3.4.1	M			
204.	1	Each evidence item shall be assigned a unique number by the LIMS	3.4.1	M			

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205.	1	The LIMS shall ensure that evidence examined in multiple laboratory areas or being subjected to multiple examinations will have the same identifier	3.4.1	M			
206.	1	The LIMS shall generate evidence identifiers for all evidence received	3.4.1	M			
207.	1	The LIMS shall also be capable of assigning additional evidence numbers at any point after the original receiving has occurred to accommodate sub-evidence, derived evidence, and created evidence (such as test firings)	3.4.1	M			
208.	1	The LIMS shall record the relationship among original evidence, derived, sub-evidence, and all other designations of property or evidence	3.4.1	M			
209.	1	The LIMS shall provide a user field to input an additional identification field on all evidence items to optionally hold an evidence identification value from the submitting organization	3.4.1	M			
210.	1	the LIMS shall provide for the input and storage of latitude and longitude information into the demographic description of evidence	3.4.1	W			
211.	1	The LIMS shall automatically create an ICOC and evidence labels during the first step of receiving	3.4.1.2	M			
212.	1	The LIMS shall provide for the assignment of priority status codes that are definable by SBCSD-SID	3.4.1.2	M			
213.	1	This priority status shall be searchable	3.4.1.2	M			
214.	1	The LIMS shall allow authorized users to change the priority of a single examination or all examinations for a single evidence item or an entire submission at any stage of the process and shall notify assigned of the change	3.4.1.2	M			

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²Code: M = Mandatory; S = Should Have; W = Want

ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
215.	1	During receiving/log-in, the LIMS shall allow, but not require, examination codes to be assigned to each evidence item, based on the request	3.4.1.3	M			
216.	1	The LIMS shall provide a means of filtering examinations specific to the laboratory section and evidence type	3.4.1.3	M			
217.	1	The LIMS shall provide the same filtering capabilities throughout all functions of the product	3.4.1.3	M			
218.	1	The LIMS shall provide for automatically assigning a series of examinations for specific types of evidence	3.4.1.3	M			
219.	1	The LIMS shall allow for the inclusion of preconfigured conditional reflex rules	3.4.1.3	W			
220.	1	LIMS receiving screens shall include a method of assigning Laboratory Sections and/or Units to the evidence	3.4.1.3	M			
221.	1	The LIMS shall not allow the status of evidence to be changed to Completed if there are any Laboratory Sections or Units that have been assigned and have not completed (or cancelled) at least one examination for that evidence	3.4.1.3	M			
222.	1	The LIMS shall be configurable to require and store a reason when an examination code is cancelled	3.4.1.3	M			
223.	1	The LIMS shall enable receiving personnel to enter the remaining case, submission, or evidence "demographic" information	3.4.2	M			
224.	1	The LIMS shall provide "type-ahead" or auto-filter through list capability for entering this data	3.4.2	W			
225.	1	When entering multiple evidence items from the same submission the LIMS shall only require case and other common information to be entered once	3.4.2	M			

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226.	1	Users shall be able to pre-fill the Log-in screen with information associated to an incident or case after input of an incident or case identification code via a drop-down menu, pick list, or type-in	3.4.2	W			
227.	1	Users shall be able to pre-fill the Log-in screen with demographic information associated to a submitting organization in the same manner	3.4.2	W			
228.	1	In instances where the demographic information contained on the submission form is available electronically, the LIMS shall automatically upload the information	3.4.2	W			
229.	1	Upon electronic upload of demographic information, the LIMS shall allow the Evidence Control Clerk performing the log-in to edit the demographic log-in information before committing it to the database	3.4.2	W			
230.	1	Information that the LIMS shall accept and manage includes, but is not limited to: Evidence Information (submitting organization, external ID, date/time collected, date/time submitted, etc.), examinations requested, date/time received, organization to receive results, and custody transfer information (relinquished by / received by)	3.4.2	M			
231.	1	The LIMS shall allow for the entry of multiple contact names and phone numbers	3.4.2	M			
232.	1	The LIMS shall allow Supervisory or other designated personnel to assign examinations to evidence after they are delivered to the laboratory section	3.4.3	M			
233.	1	The LIMS shall allow designated personnel to cancel an examination assigned at log-in for an evidence item without canceling the item	3.4.3	M			

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234.	1	The LIMS shall also allow for canceling an entire laboratory case/submission/evidence(s) with full audit trail	3.4.3	W			
235.	1	The LIMS shall have the capability to differentiate between evidence being examined in-house and evidence sent to external or other Reference labs	3.5	M			
236.	1	The LIMS shall be pre-configured to generate a COC document with information from the evidence receiving process such as the date/time evidenced, investigation reference, evidence numbers, and the examinations to be performed for subcontracted examinations	3.5	M			
237.	1	The LIMS shall have the capability to print required forms required by Reference laboratories and to populate fields on these forms with evidence information from the LIMS	3.5	M			
238.	1	The LIMS shall be able to record to whom the evidence was sent, the date sent, the date returned and the results	3.5	M			
239.	1	Data generated by subcontractors shall be entered into the LIMS manually, by scanning using optical character recognition technology and by acceptance of an EDD	3.5	M			
240.	1	These results shall be reviewed in the LIMS by the Laboratory Supervisor prior to reporting the results	3.5	M			
241.	1	The LIMS shall produce a warning if results for evidence sent to external laboratories have not been returned in a user-specified amount of time	3.5	W			
242.	1	The LIMS shall provide a means of tracking subcontractor logistics associated with different evidence types such as fees, outstanding work, and evidence types and distribution	3.5	W			

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243.	1	The LIMS shall provide the option to prepare evidence in batches that include the appropriate QC indicators specific to each analysis method	3.6	W			
244.	1	The LIMS shall permit user configuration to establish the QC requirements for the various method codes	3.6	M			
245.	2	It shall be simple to design on-screen forms and printed documents that contain the type, frequency, and placement in the run sequence of QC items and standards, as well as QC acceptance criteria for the particular analysis	3.6	M			
246.	1	The LIMS shall store pre-defined worksheets for the formats currently in use with the capability for easy configuration of additional formats as needed	3.6	M			
247.	1	Bench sheets shall be identified by examination code and the LIMS shall populate the sheets with evidence selected by the examiner or evidence available for analysis	3.6	M			
248.	1	Examiners shall have the capability to select any or all available evidence to be included	3.6	M			
249.	1	These sheets shall contain basic information such as, but not limited to, examiner name, date, time, method code, evidence number, final volume, dilutions, reagents, and QC items	3.6	M			
250.	1	The LIMS shall have the ability to generate additional labels to be placed on prepared evidence and QC in the batch	3.6	M			
251.	1	Evidence preparation bench sheets shall include a mechanism for tracking all standard reference materials and reagents back to their original source	3.6	M			
252.	1	The LIMS shall apply calculations, as pre-defined by the user, to raw data for analyses	3.6	M			

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253.	1	Once a bench sheet is filled out, the LIMS shall allow editing of that bench sheet	3.6	W			
254.	1	The LIMS shall provide the capability to un-batch and re-batch analysis batch run lists	3.6	M			
255.	1	The LIMS shall match individual evidence with their respective QC batch and allow access to the associated QC results	3.6	M			
256.	1	The LIMS shall provide a place for comments on the evidence worksheets to describe any unusual circumstances or pertinent information	3.6	M			
257.	1	These comments shall be retrievable and associative to the data for which it was originally intended	3.6	M			
258.	1	The LIMS shall distinguish between reportable comments and in-house comments (non-reportable) and provide a visible means of distinguishing the two without opening the comments field	3.6	M			
259.	1	User rights assignment shall be distinguishable for various levels of comments fields	3.6	W			
260.	1	The LIMS shall provide the option to print copies of the evidence worksheets, associated QC data, and associated comment fields	3.6	M			
261.	1	The LIMS shall calculate QC summary statistics on a unique examination or source	3.6	M			
262.	1	The user shall be able to select a date range or number of data points to be used	3.6	M			
263.	1	Information about standards and reagents used in creating QC items shall be used by the LIMS to calculate QC results	3.6	M			
264.	1	LIMS shall permit the creation of evidence collection kits from raw materials with the assignment of standard lot information	3.6	M			

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265.	1	The LIMS shall provide the examiner with lists of pending work based on analysis/method codes	3.6	M			
266.	1	In some cases, the analytical run sequences shall be determined by the QC batch preparation worksheets	3.6	W			
267.	1	The LIMS shall have the capability of storing multiple runs for a single run list, allowing the examiner to select which result they want to accept	3.6	W			
268.	1	The LIMS shall have the capability of rejecting a single analyte on a multi-analyte test without rejecting the entire examination	3.6	W			
269.	1	The LIMS shall provide logic that reviews an entered result and, depending on the examination, automatically assigns the next (confirmatory or reflex) examination based on the result	3.6	W			
270.	1	This sequence of logic shall be configurable by examination and laboratory area by authorized SBCSD-SID personnel	3.6	M			
271.	1	Part of the configuration shall include the ability to designate which examinations are completely automatic and which examinations will ask for manual confirmation of the next examination assignment	3.6	W			
272.	1	The LIMS shall support evidence preparation and analysis with non-interfaced instruments by paper worksheets and electronic worksheets	3.7	W			
273.	1	The LIMS shall generate evidence preparation / analysis worksheets (both on-screen and printable) containing identifiers of the evidence selected by the user for analysis	3.7	M			
274.	1	For those processes selected by SBCSD-SID, the LIMS shall accommodate manual entry of evidence preparation data on a single screen when evidence is grouped for preparation or grouped as a QC batch	3.7	M			

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275.	1	The LIMS shall accept, store and manage computer files, such as a scanned worksheet or digitized photographs, in a manner that associates the file with the analysis of the evidence	3.7	M			
276.	1	The LIMS shall display information collection forms designed similarly to current SBCSD-SID work sheets on a personal computer, including PCs with tablet capability and synchronization for field or portable use	3.7	W			
277.	1	The LIMS shall receive the forms (or the contents) back and automatically post/synchronize the information to the proper records and fields	3.7	W			
278.	1	Tablet PC capability shall be available for evidence processing, evidence preparation and analysis results where the instrument is not interfaced	3.7	W			
279.	1	The LIMS shall produce work-lists by querying the database by examination code, group of examination codes, instrument, laboratory area or assigned examiner	3.7	M			
280.	1	The user shall be able to prioritize the workload by parameters such as remaining hold time by evidence date and receive date, special turnaround requests, priority (e.g., standard, rush or repeat), or by date received	3.7	M			
281.	1	The work-lists shall be easily configurable depending on the laboratory's requirements and shall be printable or available on-screen with user-specified fields pre-populated	3.7	M			
282.	1	The on-screen work lists shall accept and store user input pending automatic input into the LIMS	3.7	W			
283.	1	From the lists, the examiners shall be able to select evidence to be processed and generate QC batch worksheets if required	3.7	M			

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284.	1	The LIMS shall provide the QC batch work lists on-screen, in printable form, or as an EDD to be able to be uploaded to laboratory instrumentation, optionally through third-party interface	3.7	M			
285.	1	The LIMS shall provide an option for input of analytical results for a single evidence item or a group of items	3.7.1	M			
286.	1	The LIMS shall provide a location or locations for results storage for examinations that are completed prior to completion of demographics entry	3.7.1	M			
287.	1	The LIMS shall be capable of uploading or importing analytical results and QC data from electronic file sources such as Excel spreadsheets, text delimited files, or (optimally) provide for equivalent worksheet (screen form) design capabilities for users of the system	3.7.1	M			
288.	1	All data generated shall be retained by the LIMS and shall be accessible by any authorized user	3.7.1	M			
289.	1	Results, QC information and evidence source details shall be exportable by the LIMS into Excel spreadsheets	3.7.1	M			
290.	1	The LIMS shall support entry of numeric, non-numeric, "less than"/"greater than", positive/negative, and long narrative results entry, as well as comments	3.7.1	M			
291.	1	The LIMS shall facilitate results entry by presenting entry screens in the same order as worksheets or in any other order selected by the user	3.7.1	W			
292.	1	For both numeric and non-numeric entry fields, the LIMS shall allow the fields to be configured to automatically default to a value assignable by the SBCSD-SID or to contain drop-down lists of acceptable results	3.7.1	M			
293.	1	The LIMS shall provide the option to allow manual entry of positive entries only and then default the remainder of tests in the batch to a negative value	3.7.1	W			

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294.	1	The default value shall be assignable based on a variety of business rules (e.g., customer, test, laboratory section, etc.)	3.7.1	W			
295.	1	The LIMS shall also offer the capability to simultaneously enter one result for multiple specimens	3.7.1	W			
296.	1	The LIMS shall also monitor and prevent improper results entry, e.g., an alphabetic result in a numeric-only field, as well as flag "absurd" results	3.7.1	M			
297.	1	These capabilities shall be configurable by site	3.7.1	W			
298.	1	For numeric entry, the LIMS shall provide fields for actual data results and associated normal ranges	3.7.1	W			
299.	1	The LIMS shall take into account the changing nature of the normal ranges based on conditional criteria of the evidence and apply the correct normal range based on all criteria	3.7.1	W			
300.	1	For narrative and non-numeric entry, the LIMS shall permit selection of pre-configured, standardized comments as well as free entry of long narrative input including cut-and-paste between the LIMS and other applications	3.7.1	M			
301.	1	The LIMS shall provide "type-ahead" or auto-filter through list capability for entering narrative and non-numeric data	3.7.1	M			
302.	1	The narrative entry method shall permit editing and spell checking	3.7.1	M			
303.	1	The LIMS shall allow any authorized user to add or remove spell-check dictionary entries	3.7.1	W			
304.	1	The LIMS shall allow the addition of user definable information fields for special programs that may be reportable as an EDD or electronic message to other agencies	3.7.1	W			

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305.	1	Data entry screens shall be configurable by the appropriate personnel designated in each Laboratory Area	3.7.1	W			
306.	1	The LIMS shall have the capability of storing and associating digital pictures, graphics, chromatograms, etc., to the associated evidence item(s)	3.7.2	M			
307.	1	The LIMS shall accept and store multiple image or graphic files in PDF, JPEG, TIF or GIF format with analysis results	3.7.2	M			
308.	1	It is not required to store the image in the database but the image file name and location shall be hyperlinked or otherwise stored in the LIMS database as part of the analysis results	3.7.2	W			
309.	1	The LIMS shall protect images against alteration	3.7.2	M			
310.	1	The LIMS shall display the image when the file name or other feature is selected by a user and shall include the image in electronic or printed reports as appropriate	3.7.2	M			
311.	1	When an image of an evidence item is related to other evidence items, the LIMS shall create the same hyperlink between all evidence items and the single stored image, e.g., when multiple evidence items are assigned to one incident or case	3.7.2	S			
312.	1	The LIMS image format shall be editable by the LIMS or standard image editing programs to create a transparent background drawing layer over a stored image for the purpose of highlighting, notes inclusion, and other basic drawing functions used to facilitate sketching	3.7.2	W			
313.	1	The original image and all subsequent images shall be versioned and stored in the LIMS DMS	3.7.2	M			

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314.	1	The LIMS shall provide the capability to reduce manual entry by accepting instrument results electronically, directly from the various laboratory instruments	3.8	M			
315.	2	Whenever possible, instrumentation shall be interfaced bi-directionally to the LIMS via TCP/IP	3.8	M			
316.	1	The LIMS shall be configured to accept data files from laboratory instrumentation listed in the RFP and other third-party software programs and be provided turnkey, meaning that the functionality required will be delivered pre-configured and capable of use in a production environment at the time of system acceptance	3.8	M			
317.	1	The LIMS shall receive electronic data input from numerous sources to accommodate not only the initial system configuration, but also future expansion as needs arise	3.8	M			
318.	1	the LIMS shall have the flexibility and capability for trained SBCSD-SID users to interface additional instruments to the LIMS	3.8	M			
319.	1	The LIMS shall create electronic files with the necessary evidence, Quality Control (QC), and examination information to be downloaded into all instruments that are capable of accepting run lists	3.8.1	M			
320.	1	The LIMS shall have the ability to download lists (sequences) of evidence identifiers for analysis	3.8.1	M			
321.	1	Instrument data shall be read from the files and automatically stored in the LIMS database in the same locations as used for manual or imported data entry	3.8.1	M			
322.	1	The interfaces shall use LIMS-managed batch information to create a run-list within the interfaced instrument	3.8.1	M			
323.	1	The LIMS shall hold uploaded results pending review by the examiner or technician	3.8.2	M			

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324.	1	The LIMS shall automatically evaluate QC item results and provide on-screen indication when the QC results are out of range	3.8.2	M			
325.	1	When the examiner approves the instrument results in the LIMS, the LIMS shall automatically associate the results with the correct evidence and QC items	3.8.2	M			
326.	1	The LIMS shall retain the original output file, optionally after conversion to a file format required by the LIMS, within the LIMS	3.8.2	M			
327.	1	The LIMS shall automatically associate the result file with the run list and/or with the individual evidence and QC item	3.8.2	M			
328.	1	The LIMS shall maintain the instrument file within the LIMS document management functionality	3.8.2	W			
329.	1	The LIMS shall enable interfaced instruments to continue to run and collect data when the LIMS is down	3.8.2	M			
330.	1	When the LIMS comes back on line, the system shall allow results to be imported into the LIMS and associate runs with cases, incidents and evidence items	3.8.2	M			
331.	1	The LIMS shall accept and store, optionally after conversion to a file format required by the LIMS, graphical output generated by instruments such as spectra, images, and plate/well maps	3.8.3	M			
332.	1	The LIMS shall associate the files with the run list and / or individual evidence and QC item	3.8.3	M			
333.	1	The LIMS shall maintain the graphic file within the document management function	3.8.3	W			
334.	1	The LIMS shall calculate final reportable results from input of raw, measured data, as well as allow for hierarchical calculations	3.9	M			

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335.	1	The LIMS shall automatically take into account variables such as instrument calibration response, initial and final evidence amount, final volume and dilutions when performing calculations	3.9	W			
336.	1	Upon entry and calculation of final results, the LIMS shall be capable of comparing the final results to limits or thresholds defined for that examination	3.9	M			
337.	1	If a limit violation has occurred, the LIMS shall notify the examiner or other designated personnel	3.9	M			
338.	1	The LIMS shall convert raw data to the correct final reporting units such as mg/L or µg/L using specific guidelines provided by SBCSD-SID regarding significant figures, rounding, truncation, and formatting	3.9	M			
339.	1	The LIMS shall be pre-configured to automatically calculate and store QC results within the LIMS in terms of, for example, the relative percent difference for duplicates	3.10	M			
340.	1	To facilitate the review process, the LIMS shall create and display control-charting data in order to readily access the established upper and lower control limits	3.10	M			
341.	1	The LIMS shall automatically flag out-of-limit control QC items	3.10	M			
342.	1	The LIMS shall allow the examiner to select the final evidence results to be reported, as well as indicate evidence that must be re-run as a result of the QC review process	3.10	M			
343.	1	To facilitate the review process, the LIMS shall use color, or another appropriate identifier, to differentiate acceptance, warning, and rejection ranges	3.10	M			

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344.	1	LIMS shall optionally permit, on designated parameters, the use of comprehensive rules of QC Chart interpretation as those found in AT&T/Western Electric rule sets for Statistical Process Control (SPC) charts	3.10	M			
345.	1	LIMS shall provide tools for the analysis and setting of SPC limits to include a means for parameter set outlier identification and exclusion	3.10	M			
346.	1	The LIMS shall be configurable to require various mandatory levels of review, but authorized LIMS users shall be able to configure the number of levels of review, based upon Laboratory Sections, Laboratory Units, or analysis methods	3.11	M			
347.	1	The reviewer shall access information through the LIMS to validate results for a single evidence item or QC batch	3.11	M			
348.	1	The LIMS shall list the analyses requested for each item of evidence and provide a view of any other information noted during log-in or attached to the evidence group	3.11	M			
349.	1	The LIMS shall display information concerning the results for the target analytes and for the examination code	3.11	M			
350.	1	The LIMS shall track all associated QC information	3.11	M			
351.	1	The LIMS shall automatically flag data that exceeds a defined QC or program limit and notify designated SBCSD-SID personnel that a limit was exceeded	3.11	M			
352.	1	The LIMS shall allow the capability for SBCSD-SID to assign users the right to make changes at data entry and at each level of review	3.11	M			

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353.	1	Where multiple parameters have been examined on a single item of evidence for multiple items of evidence related to a single incident or group of incidents, the LIMS shall allow results to be compared	3.11	W			
354.	1	The reviewer shall be able to set a re-analysis LIMS status based on this view	3.11	W			
355.	1	The LIMS shall require reviews to be documented, dated and accepted by the reviewer at each level	3.11	M			
356.	1	The LIMS shall print a hardcopy of the review record if required	3.11	M			
357.	1	The LIMS shall facilitate the use of business rules to ensure that all required conditions are satisfied before results are passed to the next level of review or approved for reporting	3.11	M			
358.	1	The LIMS shall be pre-configured to allow the option of utilizing password-based or other form of electronic signature, by which only designated personnel shall be authorized to conduct data review	3.11	M			
359.	1	The LIMS shall recognize authorized passwords, and shall maintain a traceability record of the review process	3.11	M			
360.	1	For each level of review, the LIMS shall record the date, time, identity, and electronic signature of the reviewer	3.11	M			
361.	1	Upon completion of the instrument run or the manual batch entry, the LIMS shall allow the examiner to review the data on an item-by-item basis, or on a batch basis	3.11.1	M			
362.	1	If the reviewer decides to review the data on a batch basis, the LIMS shall display, on one screen, all item and QC evidence included in the batch	3.11.1	M			
363.	1	There shall be a place within the LIMS for the examiner to write a short narrative to comment on any unusual circumstances or other pertinent information	3.11.1	M			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
364.	1	The LIMS shall allow the reviewer to reject individual measurements when multiple measurements have been performed and to reject the results of individual evidence from a batch	3.11.1	M			
365.	1	The LIMS shall allow for the examiner to make this decision without impacting or otherwise disrupting the normal functioning of the LIMS	3.11.1	M			
366.	1	If the examiner deems the data to be valid, the LIMS shall allow the examiner to validate, in one action, the entire batch	3.11.1	M			
367.	1	The LIMS shall provide for review by a qualified examiner who was not directly involved in the analysis	3.11.2	M			
368.	1	The LIMS shall automatically notify the reviewer that information is ready for review	3.11.2	M			
369.	1	The LIMS shall allow the technical reviewer to review the information on an item-by-item basis or on a batch basis	3.11.2	M			
370.	1	If the reviewer decides to review on a batch basis, the LIMS shall display, on one screen, all evidence and QC items included in the batch	3.11.2	M			
371.	1	The reviewer shall have automatic, quick access to all quality control data such as calibration information, blank results, method detection and method reporting limits, surrogate values, dilutions, and comments on unusual circumstances or deviations from the SOPs that may have occurred	3.11.2	M			
372.	1	If the reviewer deems the results to be valid, the LIMS shall allow the reviewer to validate, in one action, the entire batch	3.11.2	M			
373.	1	The LIMS shall provide Supervisors with the ability to simultaneously validate lower levels of validation while approving their own level	3.11.2	W			

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374.	1	If no deficiencies are found the reviewer shall be able to approve the entire set by selecting the approval option on the screen	3.11.2	M			
375.	1	If errors are found or if something does not look right, the LIMS shall allow the reviewer to assign a "disputed" status	3.11.2	S			
376.	1	The LIMS shall allow the reviewer to enter comments pertaining to the disputed data	3.11.2	W			
377.	1	the LIMS shall allow the reviewer to correct the error or send the results back to the previous level of review with comments	3.11.2	S			
378.	1	The reviewer shall also have the ability to approve partial or draft results via the LIMS for release to the submitter	3.11.2	S			
379.	1	Technical Review completion by the examiner/supervisor shall be documented, dated and recorded in the LIMS	3.11.2	M			
380.	1	The LIMS shall require an administrative review that follows the same procedures outlined for Technical Reviews	3.11.3	M			
381.	1	The LIMS shall support Section-specific SOP business processes and QA policies and procedures and prohibit various unsafe or quality-contrary practices where possible	3.12	M			
382.	1	The LIMS shall create and allow viewing of control charts	3.12	M			
383.	1	Data generated from the analyses shall be automatically entered by the LIMS into the appropriate control charts	3.12	M			
384.	1	Resulting control limits shall be readily accessible to the examiners and data reviewer with optionally automatic updating of control limits	3.12	M			

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385.	1	All control-chart QC data shall be available to authorized users in both graphical and tabular format and shall be easily associated with the evidence data that it represents	3.12	M			
386.	4	The LIMS vendor shall indicate any third-party software required and provide the software as part of the overall system	3.12	M			
387.	4	The selected Vendor shall provide the control charting software (if not included in the LIMS application) and provide the integration of the software with the LIMS	3.12	M			
388.	1	The LIMS shall have the ability to electronically store a Corrective Action Report (CAR) and associate it to an individual analysis, batch or evidence	3.12	W			
389.	1	The LIMS shall allow results editing even after evidence is completed and reported while maintaining full audit trail requirements	3.12	M			
390.	1	The LIMS shall provide a function to record and track information associated with these QA/QC items	3.12.1	W			
391.	1	The LIMS shall monitor and record such environmental conditions as temperature, humidity, carbon dioxide content, water quality, and protection of equipment and instrumentation from fluctuations and interruptions in electrical current, etc	3.12.1	W			
392.	1	The LIMS shall automatically read or accept output from continuous reading sensors for the monitored conditions and associate the values with the specific controlled space	3.12.1	W			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
393.	1	The LIMS shall track calibration and/or maintenance information relating to each analytical instrument and major SBCSD-SID asset, including: SBCSD-SID inventory number, description, class, serial number, model number, manufacturer, supplier, location, date of purchase, dates of operation, procedure version, point of contact (including name and e-mail address), preventive maintenance scheduling (daily, weekly, monthly and number of runs cycles), calibration records, warning of when preventive maintenance is due, maintenance contract records, maintenance records (date and nature of work), recertification records (some instruments sent out for re-certification), and repair records.	3.12.2	M			
394.	1	The LIMS shall enable monitoring on a fixed schedule or by tracking specified acceptance criterion.	3.12.2	S			
395.	1	This function shall be accomplished directly by the LIMS, as delivered, or by an external program provided by the vendor.	3.12.2	M			
396.	1	The LIMS shall track and report this information, and generate warnings when/if conditions exceed designated parameters.	3.12.2	S			
397.	1	The LIMS shall track compliance against different maintenance schedules for each item.	3.12.2	S			
398.	1	The LIMS shall provide a mechanism for calibration intervals to be set by time or usage requirements.	3.12.2	S			
399.	1	All calibration activities shall be capable of being documented and checked against calibration limits.	3.12.2	S			
400.	1	The LIMS shall flag "out of limit results".	3.12.2	S			
401.	1	A field for narrative comments shall be available with the LIMS so that results or actions can be explained.	3.12.2	S			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
402.	1	Faults, breakdowns, and non-routine operations and maintenance costs shall be recorded and tracked in the LIMS with the LIMS storing an optional, brief narrative explanation of the maintenance performed.	3.12.2	S			
403.	1	Various printed reports shall be included with the LIMS, such as: <ul style="list-style-type: none"> • Instrument inventory listing with calibration and maintenance schedules • List instruments due for calibration within X days • List instruments due for maintenance within X days • Overdue calibrations or maintenance • The entire maintenance log for any instrument • Maintenance logs including routine and/or non-routine maintenance 	3.12.2	W			
404.	1	In a similar manner, the LIMS shall monitor the Draeger breath alcohol instruments periodic accuracy checks (see section 2.3.2).	3.12.2	S			
405.	1	The LIMS system shall send courtesy memos to remind key users of the periodic check requirement and to alert breath alcohol staff to non compliance issues, and expired solutions.	3.12.2	S			
406.	1	The LIMS shall support the reporting processes required by SBCSD-SID and its customers	3.13	M			
407.	1	The LIMS shall enforce and automate the quality review process employed by the SBCSD-SID	3.13	M			
408.	1	The LIMS shall send results in a variety of methods	3.13	M			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
409.	1	The LIMS shall automatically generate the final report of analysis within a single discipline for all evidence in a submission immediately after approval of the last results for all assigned examinations of that discipline of all evidence in the submission	3.13.1	M			
410.	1	The final report shall not be released and electronically transmitted results shall not be sent by the LIMS until all required reviews are complete	3.13.1	M			
411.	1	The LIMS shall provide designated personnel (e.g., the Laboratory Manager) the capability to prevent the issuing of a report to designated recipients	3.13.1	M			
412.	1	Upon final approval the LIMS shall send the generated report to a print, fax and/or e-mail queue	3.13.1	M			
413.	1	The LIMS shall also provide for the printing of immediate reports by manual request	3.13.1	M			
414.	1	The LIMS shall allow a comment to be attached stating that the report was generated manually and to whom it was sent	3.13.1	M			
415.	1	The LIMS shall provide the means of designing multiple report formats to meet laboratory requirements	3.13.2	M			
416.	1	The LIMS shall generate Main Reports, Reanalysis Reports, Supplementary Reports, and Revised Reports, when appropriate	3.13.2	M			
417.	1	The LIMS shall support Microsoft Word, Excel, Access, Adobe Acrobat, SQL Server, and Crystal Reports as programs for report generation and shall allow attachment or importation of Word documents to generated reports	3.13.2	M			
418.	1	The LIMS shall also support output in XML format for reporting	3.13.2	M			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
419.	1	The LIMS shall provide query capabilities for the database and input information such as submitter, program or funding codes, date ranges, section or departmental areas, evidence identifier range(s), laboratory assigned number range(s), and QC data, in a totally configurable format	3.13.2	M			
420.	1	Report formats and layouts shall have flexibility and allow changes in report element sequence	3.13.2	M			
421.	1	Reports shall allow for inclusion of comments pertaining to, for example, log-in, evidence preparation, and analysis, along with evidence results and QC information	3.13.2	M			
422.	1	Authorized personnel shall be able, through password access, to edit any and all information included on the report documents	3.13.2	M			
423.	1	The LIMS shall maintain a record of all changes to report information that have been entered through the use of audit trail functionality	3.13.2	M			
424.	1	Reports shall be customizable to contain evidence results only or to also include QC data.	3.13.2	M			
425.	1	Forms shall be designed to be portrait or landscape oriented	3.13.2	M			
426.	1	The LIMS shall have the ability to include information regarding how reports are to be distributed, such as by fax, e-mail, or any special reporting requirements for mailing multiple (footnote identified) copies	3.13.2	M			
427.	1	The LIMS shall be configured to automatically hold all reports from specified laboratory areas, or reports that have been passed through to specified laboratory areas even though they may have originated in other areas of the laboratory, until released by authorized personnel	3.13.2	M			

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428.	4	The vendor shall develop and deliver ten (10) additional, filterable client-requested reports prior to finalization of the LIMS (pre-"Go Live" date), and in accordance with provided formats and filtering options	3.13.2	M			
429.	1	The vendor shall also ensure that SBCSD-SID is supplied the training required to create new integrated reports	3.13.2	M			
430.	1	The proposal shall include examples of potential report formats that the SBCSD-SID may utilize	3.13.2	M			
431.	1	The LIMS shall have the ability to automatically generate reports on a scheduled or batch basis	3.13.2	M			
432.	1	The LIMS shall allow SBCSD-SID to designate the number and destination of the reports that are to be printed, e-mailed, posted to a website, or faxed	3.13.2	M			
433.	1	The LIMS shall also have the ability to automatically generate and send a report and/or notification when a triggered event occurs in the LIMS, e.g., when a controlled substance analysis meets the felony charge threshold	3.13.2	M			
434.	1	Final results shall be made accessible (with security) to the submitting parties via e-mail, Intranet, or Internet	3.13.2	M			
435.	1	EDD's of final and preliminary results shall be available in a variety of final formats	3.13.2	M			
436.	1	Final Reports shall include all examination results within a single discipline from all items in a case that are identified to be reported	3.13.2.1	M			
437.	1	Reporting formats shall be developed to include results for a single parameter or numerous examination results on the same sheet	3.13.2.1	M			
438.	1	Final report designs shall have flexibility and allow changes in report element sequence	3.13.2.1	M			

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439.	1	Reports shall include comments pertaining to log-in, evidence preparation, and analysis, along with evidence results and QC	3.13.2.1	M			
440.	1	The reissued report shall be clearly identified as a Revised Report and shall provide for the signature (digital, if the report is to be issued electronically) of the Supervisor	3.13.2.2	M			
441.	1	the generation of a Revised Report shall trigger an automatic notification to the QAO	3.13.2.2	W			
442.	1	The report shall be clearly identified as a Supplementary Report	3.13.2.3	M			
443.	1	The LIMS shall provide reprint capability of any report while maintaining and reporting original print date and case and evidence demographics	3.13.2.4	M			
444.	1	This functionality shall reproduce the original report with original signatures and the original report date	3.13.2.4	M			
445.	1	The LIMS shall provide access to reports in an on-line manner after proper authentication	3.13.2.5	M			
446.	1	The LIMS shall be capable of granting read-only access to authorized personnel on an agency specific basis and on a regional-basis for DAs	3.13.2.5	M			
447.	1	The LIMS shall be configured such that reports can be automatically or manually e-mailed and/or faxed	3.13.3	M			
448.	1	The LIMS shall provide functionality that allows users to designate which reports are to be automatically e-mailed and/or faxed to certain clients	3.13.3	M			
449.	1	The LIMS shall pass reports to e-mail/fax servers at the SBCSD facility after final approval of the results	3.13.3	M			
450.	1	The LIMS shall provide verification to SBCSD-SID that e-mails/faxes were sent to clients	3.13.3	M			

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451.	1	The LIMS shall maintain information about the storage location of all evidence even after analysis and reporting are complete	3.14	M			
452.	1	The storage location shall be searchable to produce an inventory or to permit locating evidence with specific characteristics	3.14	M			
453.	1	For evidence that is retained, the LIMS shall be capable of identifying the storage location and all analytical results, QA/QC information, and related information concerning the evidence	3.14	M			
454.	1	The LIMS shall track and provide storage location and movement information details of evidence to include but not limited to the following: <ul style="list-style-type: none"> Define storage locations using a 4-level hierarchy. <ul style="list-style-type: none"> Level 1 – Storage location (e.g. Freezer/Room...) Level 2 – Sub-storage location (e.g., shelf number...) Level 3 – Container (e.g., box...) Level 4 – Evidence Item 	3.14	M			
455.	1	<ul style="list-style-type: none"> Users authorized to remove items from the area 	3.14	M			
456.	1	<ul style="list-style-type: none"> Store various attributes against a storage location (e.g., room temperature/freezer/..., capacity...) 	3.14	W			
457.	1	<ul style="list-style-type: none"> Report on storage location by various attributes 	3.14	M			
458.	1	<ul style="list-style-type: none"> Assign storage location ID s at all levels of storage locations 	3.14	M			
459.	1	<ul style="list-style-type: none"> Print storage location bar code (or equivalent technology) labels to label storage locations 	3.14	M			

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460.	1	<ul style="list-style-type: none"> Scan storage location bar code (or equivalent technology) labels to enter storage location info into system 	3.14	M			
461.	1	<ul style="list-style-type: none"> Flag items that have been stored in excess of a time period that is configurable by authorized SBCSD-SID personnel 	3.14	M			
462.	1	The LIMS shall maintain an unlimited number of schedules and scheduled events in order to reduce the effort required to track these activities	3.15	W			
463.	1	The LIMS shall include a robust scheduling tool that allows flexibility for <i>ad hoc</i> changes	3.15	M			
464.	1	Schedules shall be maintained for Routine Maintenance of Instruments and Other Equipment, Internal and External Training, Calibration, Proficiency Testing, Audits, QC, reagent expiration dates, on-call responders and supervisor, duty (work), court scheduling, and appointments	3.15	M			
465.	1	Schedules shall be capable of being set at different intervals and shall include configurable lead times that can be entered by designated personnel	3.15	M			
466.	1	The LIMS shall provide functionality utilizing lead times as triggers to send reminders to appropriate personnel of upcoming scheduled events	3.15	M			
467.	1	The LIMS shall also provide for notification of appropriate personnel if specified actions are overdue, e.g., instrument calibration or examiner competency reviews	3.15	M			
468.	1	The schedules shall be printable and capable of being faxed, e-mailed, etc	3.15	W			
469.	1	The LIMS shall support the scheduling events depicted in Figure 33	3.15	M			

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470.	1	The items contained in this section shall be provided in direct support of the previously described SBCSD-SID Workflow Processes	3.16	M			
471.	1	the capability for the requested functionality shall exist without requiring mandatory use by all LIMS users or Units	3.16	M			
472.	1	The LIMS shall provide a simple method of designing, and saving for re-use, queries and <i>ad hoc</i> queries	3.16.1	M			
473.	1	The LIMS shall permit storage and later execution of queries and <i>ad hoc</i> queries	3.16.1	M			
474.	1	The output from <i>ad hoc</i> queries shall be able to be directed to a computer file for subsequent analysis by other software	3.16.1	M			
475.	1	The LIMS shall provide the ability to query the database as specifically designated throughout this document and generally in support of all functional areas described throughout this document	3.16.1	M			
476.	1	The LIMS-provided basic properties of query and <i>ad hoc</i> query capabilities shall include, but not be limited to: • Inquiry screens that are easily accessible by end users with a single keystroke	3.16.1	M			
477.	1	• Inquiry design based on selectable fields	3.16.1	M			
478.	1	• Availability to query all fields in the database	3.16.1	M			
479.	1	• Ability for authorized users to create ad hoc queries	3.16.1	M			
480.	1	• Ability to create queries using fuzzy logic	3.16.1	W			
481.	1	• Ability to query on multiple fields and/or partial fields	3.16.1	M			
482.	1	• Ability to use Query By Example (QBE)	3.16.1	W			

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483.	1	• Ability of being saved by the user who created them and to save them for future use by the author and, optionally, authorized users	3.16.1	M			
484.	1	• Ability to schedule queries to automatically run at specified times	3.16.1	S			
485.	1	• Ability to report the results of queries as text reports and/or as graphical reports	3.16.1	M			
486.	1	• Ability to export query results to MS Word and/or MS Excel	3.16.1	M			
487.	1	• Ability to route query results to Fax queues	3.16.1	W			
488.	1	The LIMS shall be pre-configured with the capability to create and receive EDDs in accordance with compliance standards including, but not limited to, Justice Extensible Markup Language (JXML)	3.16.2	M			
489.	1	The LIMS shall provide the ability to create, accept, and parse ASCII files; comma delimited, tab delimited, fixed field width	3.16.2	M			
490.	1	When electronic files are received remotely from a submitter, the LIMS must acknowledge receipt of each file to the submitter	3.16.2	W			
491.	1	The LIMS must also notify the submitter of any noted problems during transmission	3.16.2	W			
492.	2	All means necessary to reasonably preclude the addition of duplicate records containing case demographics, suspects, witnesses and the like shall be taken/facilitated in such transfers	3.16.2	M			
493.	1	The LIMS shall take into account data transfer issues associated with transferring data to the aforementioned organizations and programs	3.16.2	M			

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494.	1	The EDDs must adhere to standardized formats such as JXML	3.16.2	M			
495.	1	Data protocols shall use standard formats such as Extensible Markup Language (XML) wherever possible	3.16.2	M			
496.	1	the LIMS shall be pre-configured to create and receive EDDs for instrumentation and other programs	3.16.2	M			
497.	1	The LIMS shall accept/create EDDs in a variety of formats that include HTML, XLS, PDF, DOC, txt, etc	3.16.2	M			
498.	2	The EDDs shall not require a proprietary language for definition or creation	3.16.2	M			
499.	4	The LIMS vendor shall specify whether the LIMS will manage the EDD generation via internal LIMS functions or through an external application	3.16.2	M			
500.	4	If an external application is required, the LIMS vendor shall identify the specific software product proposed to satisfy this requirement and shall also price separately associated costs pertaining to the software	3.16.2	M			
501.	4	The LIMS vendor shall address these matters and explain how the mechanism for EDD generation and delivery will function	3.16.2	M			
502.	1	All of the chemical standards and reagent information shall be maintained in the LIMS	3.16.3	M			
503.	1	The LIMS shall also provide the ability to track all standards and reagents from vendor receipt/creation to expiration or depletion, including all interactions between the two	3.16.3	M			
504.	1	The LIMS shall provide capability for examiners to record information such as lot number, constituents, expiration date, received by, received date, created by, created date, and concentration, upon receipt or creation of various standards	3.16.3	M			

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505.	1	As standards are used to create secondary and working standards, the LIMS shall provide the ability to add information such as dilution volumes, concentrations, expiration dates, creation date, and examiners, etc.	3.16.3	M			
506.	1	The LIMS shall provide for the optional association of reagent lots to the QC batch for the purpose of NIST traceability	3.16.3	M			
507.	1	Information about standards used in creating QC evidence shall be used by the LIMS to calculate QC results	3.16.3	M			
508.	1	The LIMS shall track expiration of reagent lots and validations and shall warn laboratory personnel who attempt to use expired or out-of-validation reagents or standards	3.16.3	M			
509.	1	The LIMS shall provide functionality to maintain an inventory of chemicals and supplies in each Section or Unit	3.16.4	M			
510.	1	The information to be accepted by the LIMS shall include chemical name, description, quantity, container type, supplier, lot number, expiration date, storage area, and verification of receipt of the MSDS	3.16.4	M			
511.	1	The LIMS shall be able to clearly distinguish between chemicals, kits and other supplies	3.16.4	M			
512.	1	The LIMS shall be able to print out a hardcopy of these records and provide a hypertext link to MSDS information on the chemical manufacturer's website or a file on the SBCSD network	3.16.4	M			
513.	1	The LIMS shall provide the capability to limit access to the inventory data	3.16.4	S			
514.	1	The LIMS shall track the inventory of all chemicals and other supplies in each laboratory, from receipt area through disposal or consumption	3.16.4	M			

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515.	1	The LIMS shall provide the ability to add new types or categories to the inventory and to add new lot numbers to existing inventory types	3.16.4	M			
516.	1	The LIMS shall maintain information about the number of each item in each laboratory area and/or each storage area in the laboratory	3.16.4	M			
517.	1	The information recorded in the LIMS regarding inventory shall be placed into a "history" so that SBCSD-SID personnel can calculate usage rates over a period of time	3.16.4	W			
518.	1	The LIMS shall allow designated users to query the database using date ranges to calculate usage rates for the last year, two years, three years, etc.	3.16.4	W			
519.	1	Once initial entry of a supply item has been accomplished, the LIMS shall allow an authorized user to decrement the quantity of an inventory item by simply scanning the bar code of that item	3.16.4	W			
520.	1	While in the inventory interface screen, scanning the bar code number shall bring up the records for that specific item	3.16.4	M			
521.	1	If inventory levels fall below a minimum designated threshold (to be determined on an item-by-item basis), the LIMS shall generate a Request for Purchase, including all ordering information, indicating more stock of said material must be ordered	3.16.4	W			
522.	1	The LIMS shall route the Request for Purchase to designated personnel who would then be able to electronically approve the request and forward it to additional personnel, whose approval is required	3.16.4	W			
523.	1	The LIMS shall facility entry of approved orders into the SBCSD Financial Management System	3.16.4	W			

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²Code: M = Mandatory; S = Should Have; W = Want

ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
524.	1	In cases where a chemical or other supply is used sparingly and only one container is kept in current laboratory stock, the LIMS shall provide a place for the user to manually generate an order notification	3.16.4	W			
525.	1	The order shall be automatically sent to appropriate personnel, similarly to when a minimal threshold is reached	3.16.4	W			
526.	1	The LIMS shall allow approved personnel the ability to record depletion/disposal information of empty chemical containers	3.16.4	M			
527.	1	Information recorded for empty containers includes, but is not limited to: LIMS-assigned chemical inventory number, date/time depleted, depleted by, disposal method, and disposal location	3.16.4	W			
528.	1	The LIMS shall manage inventories of evidence collection kits	3.16.4	M			
529.	1	The LIMS shall assign lot numbers and, optionally, expiration dates, for evidence kits assembled and reagents created by SBCSD-SID	3.16.4	M			
530.	1	The LIMS shall track inventory at the lot number level to ensure older stock is consumed before newer items are issued	3.16.4	M			
531.	1	The LIMS shall be able to query item stock quantities by storage location, item ID, and other criteria	3.16.4	M			
532.	1	The capability for the requested functionality shall exist without requiring mandatory use by all LIMS users or sections/units	3.17	M			
533.	1	The LIMS shall provide functionality to accept asset information and store it in the System	3.17.1	M			
534.	1	Information to be stored and tracked in the LIMS shall include information listed previously	3.17.1	M			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
535.	1	The LIMS shall allow the user to query the system to readily determine assets on hand and other status information, including but not limited to: manufacturer, model number, serial number, date purchased, date installed, price paid, etc.	3.17.1	M			
536.	1	The LIMS shall assist SBCSD-SID in meeting regulatory requirements to participate in PT programs	3.17.2	M			
537.	1	This shall include: tracking the status of PT evidence (e.g., in-progress, results reported), PT number, person assigned to, due, date, analyte and type of test	3.17.2	M			
538.	1	In addition the LIMS shall facilitate incorporating PT items into the workflow, recording PT item results, recording who examined the PT item, and recording PT scores	3.17.2	M			
539.	1	The LIMS shall provide a means to track employee training and competency	3.17.2	M			
540.	1	The LIMS shall provide a means to track an employee's authorization for performing specific examinations	3.17.2	M			
541.	1	The LIMS shall provide advance warning when a person's authorization to perform specific examinations is about to expire	3.17.2	M			
542.	1	The LIMS shall generate an e-mail to a person's supervisor if they perform an examination for which they are not authorized	3.17.2	S			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
543.	1	The LIMS shall be capable of interaction with programs such as are listed below for external use of system information. <ul style="list-style-type: none"> • Microsoft Office • Screen capture from other applications including web browsers • Reporting <ul style="list-style-type: none"> ○ Crystal Reports ○ Microsoft Access ○ Microsoft SQL Server • Ask Sam • More Hits 	3.18	M			
544.	1	The LIMS shall generate reports and provide other information in a format deliverable via SBCSD web servers	3.18	M			
545.	1	the LIMS shall be capable of supplying and/or receiving data via ODBC connections and in XML format	3.18	M			
546.	1	The LIMS shall be capable of storing basic information in regard to billing external, or transfer costing internal, agencies as well as tracking basic cost data associated with the following operations: <ul style="list-style-type: none"> • Evidence Kit Creation • Routine Supply Provisioning and Distribution • Reagent and Standard Use • Examination Billing • Storage Billing 	3.19	M			
547.	1	Associated billing and purchasing data shall include vendor/consumer demographics and be available for EDD generation and triggering by batch or event to update related financial programs	3.19	M			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
548.	2	The primary design of the delivered LIMS shall be capable of supporting simultaneous users without degradation of LIMS performance as users are incrementally added	4.1	M			
549.	2	The delivered LIMS shall support a minimum of fifty (50) concurrent users through the system infrastructure.	4.1	M			
550.	2	the LIMS shall support users external to SBCSD	4.1	M			
551.	4	The proposal shall include any licensing options that are available and will support the required number of users	4.1	M			
552.	4	The reference to "users" with regards to licensing shall not include instrument interfaces, persons accessing finished data, or peripheral devices	4.1	M			
553.	2	All components of the delivered LIMS shall be fully 32-bit compatible with Microsoft Windows NT or 2000	4.1	M			
554.	2	The delivered LIMS shall have an open architecture so that SBCSD personnel or their delegates may make modifications and enhancements to the LIMS as their business requirements change	4.1	M			
555.	2	The delivered LIMS shall be based on industry-standard, commercially available components and tools	4.1	M			
556.	2	The user interface screens and code shall be modifiable by SBCSD laboratory or IT personnel with commonly available editing tools	4.1	M			
557.	1	All LIMS network applications shall support Transmission Control Protocol/Internet Protocol (TCP/IP) standards	4.1.1	M			
558.	1	The delivered LIMS shall provide security to protect the integrity of the data	4.2	M			
559.	1	The security measures shall be compatible with Windows networking, Internet Explorer, SQL Server, and Windows Active Directory	4.2	M			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
560.	1	The delivered LIMS shall provide configurable security for the central database	4.2.1	M			
561.	1	Any method of accessing the central database, whether through the LIMS application or external programs, shall require a login identifier and password	4.2.1	M			
562.	1	This security shall provide read-only, limited editing and full access to the database and be configurable as to types of access granted to all objects within the central database	4.2.1	M			
563.	1	The delivered LIMS application shall provide configurable security for all users of the application	4.2.2	M			
564.	1	Each user shall gain access to the application through the use of a login and password	4.2.2	M			
565.	1	Based upon the user's information, the delivered LIMS shall control which menus, screens, and functions within screens are available to that specific user	4.2.2	M			
566.	1	User security shall be configurable by SBCSD-SID LIMS administrative personnel	4.2.2	M			
567.	1	The delivered LIMS shall include configurable security for access to network resources such as printers, directories, and files	4.2.3	M			
568.	2	The delivered LIMS shall make use of the Windows 2000 / XP security paradigm for access to server resources	4.2.3	M			
569.	1	The delivered LIMS shall be capable of access via the Internet	4.2.4	M			
570.	2	Access via the Internet must include appropriate security through firewall and virtual private network technology	4.2.4	M			
571.	1	The delivered LIMS shall be capable of interacting with Microsoft Office programs such as Word, Excel, and Access, for external use of system information	4.3	M			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
572.	1	The LIMS shall generate reports and other information in a format deliverable via SBCSD-SID web servers and will be integrated with other SBCSD enterprise applications including but not limited to CNI/JIMS, AFIS, and Central Mugshot Repository for supplying and/or receiving data	4.3	M			
573.	3	The proposer shall discuss their experience integrating systems such as those listed above	4.3	M			
574.	4	Pricing for these interfaces shall be listed as Options that SBCSD may or may not exercise	4.3	M			
575.	4	Proposers shall individually price each interface described above	4.3	M			
576.	2	The delivered LIMS shall be pre-configured to accept EDDs from program databases and use the information to update the LIMS database	4.4	M			
577.	2	The delivered LIMS shall also be pre-configured with all the fields needed to create EDDs that will <i>directly</i> feed into the other programs listed in the previous paragraph and contained in Appendix VI	4.4	M			
578.	2	While these fields are required to be available in the LIMS database, they shall not be mandatory to complete throughput of samples and sample data	4.4	M			
579.	4	The proposer shall price, individually, each deliverable that is to be created in order to feed and receive data from each of the program databases directly	4.4	M			
580.	2	The delivered LIMS shall be pre-configured to create and receive EDDs for instrumentation, hand held Personal Digital Assistant (PDAs), and other programs	4.4	M			
581.	1	If the LIMS does not have the capability of generating EDDs internally, it shall be able to import/export data to an external resource for EDD preparation	4.4	M			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
582.	1	It shall also be possible to manually enter data for EDD submittal that is not tracked by the LIMS	4.4	M			
583.	4	It is incumbent on the LIMS provider to address these matters and explain how a mechanism for EDD generation and delivery will function to accomplish these requirements	4.4	M			
584.	4	The vendor shall deliver all documentation required for correct operation and maintenance of all components of the proposed LIMS	4.5	M			
585.	4	The proposal shall include pricing for documentation of the LIMS design	4.5.1	M			
586.	4	This documentation shall include a design specification detailing system functionality as well as the design of the central database including work/data flow diagrams and entity relationship diagrams	4.5.1	M			
587.	4	The proposal shall include four hard copies and one electronic copy of current functional user and system administration manuals	4.5.2	M			
588.	5	Delivery of the LIMS shall include delivery of all source code for database development and the user interface as well as any auxiliary programs integrated into the LIMS	4.5.3	M			
589.	5	This working copy of the delivered LIMS source code shall be placed in an escrow account (to be mutually agreed upon), in the event of vendor default or loss of vendor business viability	4.5.3	M			
590.	4	The vendor shall provide a list of recommended software for continued expansion of the LIMS	4.5.3	M			
591.	1	The delivered LIMS shall include access to a context-sensitive Help System that provides specific information about each screen of the application	4.5.4	M			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
592.	2	The help information for each screen shall describe the function or purpose of each user entry field and identify the range or syntax of permitted values	4.5.4	M			
593.	4	In concert with the design specification, the proposer shall provide examples of the user interface to demonstrate methodology and style of the screens	4.6	M			
594.	4	The proposal shall provide examples of the management reports that will be provided with the LIMS	4.7	M			
595.	4	The proposal shall identify all tools and third- party software necessary for proper administration of the delivered LIMS	4.8	M			
596.	4	These tools shall cover management and administration of the LIMS database, the user interface, and any auxiliary programs integrated into the LIMS	4.8	M			
597.	2	The LIMS shall not rely on proprietary technology or components for routine maintenance	4.8	M			
598.	4	Delivery of the LIMS shall include delivery of all source code for database development and the user interface as well as any auxiliary programs integrated into the LIMS	4.8	M			
599.	4	The proposal shall define the boundaries of the LIMS Warranty and Support	4.9	M			
600.	5	At a minimum, the LIMS shall be warranted against deficiencies in functionality as defined in this document) and defects in operation for a period of one year from the date of LIMS acceptance by SBCSD	4.9.1	M			
601.	4	The proposal shall include pricing for extending the warranty beyond the initial year in the form of a yearly maintenance agreement	4.9.1	M			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
602.	4	The proposal shall include pricing for Software Assurance to include, but not limited to, LIMS upgrades in concert with upgrades by SBCSD to the server operating system, server database program, and client operating systems as well as all other standard components integrated into the LIMS	4.9.1	M			
603.	4	The proposal shall include pricing for all available options for varying levels of technical support	4.9.2	M			
604.	4	Terms for on-site support and travel expenses shall also be defined	4.9.2	M			
605.	5	The proposal shall be capable of providing technical support through one or more of the following means: <ul style="list-style-type: none"> • On-Site Support • Virtual Private Network (VPN) • Telephone Support (Indicate days and hours of availability) • Email Support • File Transfer Protocol (FTP) Support 	4.9.2	M			
606.	4	The proposal shall include pricing for one (1) year of full-time, on-site technical support to assist with the LIMS implementation	4.9.3	M			
607.	4	Implementation assistance shall be proposed as an optional item	4.9.3	M			
608.	4	The delivered LIMS shall operate within the data processing environment of SBCSD	Error! Reference source not found.	M			
609.	4	The proposer shall install the LIMS within an infrastructure that meets or exceeds the requirements identified by the vendor	5.1	M			

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610.	4	The actual number of servers and their configurations shall be determined after the vendor has been selected	5.1	M			
611.	2	The proposer shall install the LIMS web server component on a server running a standard SBCSD operating system (see Section 5.1)	5.2	M			
612.	2	The LIMS web server component shall utilize Microsoft Windows Internet Information Server (IIS).	5.2	M			
613.	2	The LIMS shall support Microsoft Internet Explorer (IE) for browser access	5.3	M			
614.	2	The LIMS shall support the most recent version of IE as well as earlier versions	5.3	M			
615.	2	The LIMS shall support other web browsers also.	5.3	M			
616.	4	The proposer shall install and the LIMS shall utilize a server-based central database to be located on the System server	5.2	M			
617.	2	The preferred database application is Microsoft SQL Server 2000 relational database that shall be capable of expansion and modification by SBCSD	5.2	M			
618.	2	The delivered LIMS shall allow multiple users to access the data simultaneously for data entry and retrieval without locking each other out	5.2	M			
619.	5	The proposer shall provide any necessary drivers for interaction between the user interface and the LIMS database	5.2	M			
620.	2	The central database shall be provided complete with tools for database management, archiving, and restoring from archive	5.2	M			
621.	4	The cost for these tools shall be included in the LIMS pricing in the proposal	5.2	M			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
622.	2	Laboratory workstations shall use <i>Microsoft Windows XP</i> operating systems and Microsoft Office Professional office automation products	5.6	M			
623.	1	The delivered LIMS shall support transfer of data between the LIMS and office automation products via Dynamic Data Exchange (DDE) or Object Linking and Embedding (OLE)	5.6	M			
624.	1	The delivered LIMS shall backup and archive all files to a suitable storage area network (SAN) and disaster recovery solution administered by SBCSD	5.7	M			
625.	2	This information shall be organized to facilitate retrieval of specific data	5.7	M			
626.	5	The delivered LIMS shall also include support for moving data from the active database to historical or archive databases	5.7	M			
627.	5	The central database shall be provided complete with tools for database management, archiving, and restoring from archive	5.7	M			
628.	4	The vendor shall provide responses to each of the requirements contained in the RFP using the Source Selection Matrix (SSM) located in Appendix III	6.1	M			
629.	4	Shall a functionality requirement identified in this RFP be proposed as "not to be provided turn-key", the vendor shall so state in the "Comments" section of Appendix III for the requirement	6.1	M			
630.	4	If required functionality cannot (or will not) be provided by the proposer, the vendor shall provide an estimate of the resources required for SBCSD to organically develop the functionality or to have the unsupported work contracted to another vendor / integrator	6.1	M			
631.	2	The LIMS and all components thereof must be fully compliant with Year 2000 requirements	6.2	M			

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632.	4	the LIMS shall be installed and fully functioning within nine months of contract award	6.3	W			
633.	4	Submittals shall include a schedule, with measurable benchmarks, for the completion of the various tasks associated with this project and assuming a November/December 2007 award date	6.3	M			
634.	4	All submitted cost proposals shall address the issues mentioned in this document and clearly state the features that will not be included in the base bid price	6.4	M			
635.	4	Any deficiencies or alternative strategies for fulfilling the requirements of the LIMS outlined in this document shall be addressed	6.4	M			
636.	4	Unless stated to the contrary, it will be assumed that the features identified in the cost proposal (VII) are included and shall be provided at no additional cost to SBCSD-SID	6.4	M			
637.	4	Total costs shall be expressed both numerically and in written form in the appropriate location on the bid form (Appendix VII)	6.4	M			
638.	4	The proposal shall include a discussion of any service contract options offered by the proposer	6.4.1	M			
639.	4	The proposal shall include a cost per hour charge, and number of hours required for these services, and a discussion on how such situations will be handled	6.4.2	M			
640.	4	Submittals shall include a discussion of any warranties or guarantees that are applicable to the offered products and services, which will be considered as part of the submittal evaluation process	6.4.3	M			
641.	4	SBCSD requires all proposed LIMS be provided with a 12 month warranty (starting from the completion of end-user training) and shall be priced accordingly	6.4.3	M			

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ID	Type (1)	REQUIREMENT	RFP Section	CODE (2)	YES, YES/Clarify Alternate, NO	Proposal Ref (Book/Sect/Page)	Comments
642.	4	The contents of this proposal shall be maintained in strict confidence by the receiving proposer	6.4.4	M			
643.	4	The site license shall include laboratory personnel actively accessing the main LIMS application as well as users external the SBCSD	6.4.5	M			
644.	4	If your firm does not offer site licensing, the proposal shall discuss the various cost approaches (licenses) offered and list the least expensive one year option available on the cost proposal form (Appendix VI).	6.4.5	M			
645.	4	Submitted proposals shall discuss how the LIMS will address the specific needs of the SBCSD enterprise (and applicable supporting and supported SBCSD organizations) that are outlined in this document, in addition to any other LIMS features that are proposed by the Vendor	7	M			
646.	4	Omissions regarding features, performance, and/or functionality that are stated in the RFP and not otherwise addressed shall be the responsibility of the LIMS vendor	7	M			
647.	4	The proposal shall include a pre-install owner checklist that covers hardware, software and staffing levels that SBCSD-SID must provide	7.1	M			
648.	4	The selected LIMS vendor or their designated representative shall perform the initial installation of the LIMS including configuration, data conversion and customization tasks	7.1	M			
649.	4	Data conversion and customization tasks shall be separately priced	7.1	M			
650.	4	Proposers shall provide, as part of their proposal, a path or sequence of events, including a timetable, for the completion of this effort	7.1	M			

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651.	4	This discussion shall address the various worksheets, reporting formats, and other customized documentation required by the laboratory	7.1	M			
652.	4	If the installation process is separate from the LIMS software in the bid, a recommended path for completion of the installation process shall be included in any submitted proposal	7.1	M			
653.	1	The proposer shall provide LIMS user training in two phases	7.2	M			
654.	1	Training shall be provided to System Administration users at the time of initial installation, and end user training shall be provided at the time of the final installation	7.2	M			
655.	4	The proposer shall include a detailed discussion of how LIMS training is to be addressed	7.2	M			
656.	4	The discussion shall include a list of course titles, course abstracts, and a description of the target audience	7.2	M			
657.	4	The proposer shall provide one hard copy of current functional user and system administration training documentation as well as one hard copy of all current user documentation, if different, for each SBCSD individual designated as a system administrator	7.3	M			
658.	4	All training and user manuals/documentation will be returned to the proposer	7.3	M			
659.	2	For the delivered LIMS, all data entry fields in the user manual/documentation shall identify permitted data types, permitted ranges of variables, and relationships with other data	7.3	M			

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Appendix V – Reports and Labels

Required Reports

Report of Examination
Firearms Worksheet
Disposition List
Chain of Custody
Shipping List

Required Labels

Evidence / Sub-evidence
Case Folder
QC Sample

Appendix VI – Cost Proposal

INCLUDE WITH PROPOSAL, ENCLOSED IN SEALED ENVELOPE MARKED:
"APPENDIX VII - COST PROPOSAL"

COMPANY NAME: _____

<i>ITEM</i>	<i>PRICE</i>	
1.0 Base LIMS Application Software for 4 Concurrent Users (Including 1 year warranty / support costs)		
1.1 Additional Modules Not Included Above (I.e., Control Charting, Standards Tracking, Pre-Treatment Module, Accounts Receivable, Report Writer, Bar Coding, etc.) LIST ALL IF NOT INCLUDED IN #1 ABOVE AND INDICATE IF CUSTOMIZATION IS REQUIRED.	Is Customization Required?	PRICE
Module 1.		
Module 2.		
Module 3.		
Module 4.		
Module 5.		
Module 6.		
Module 7.		
Module 8.		
Module 9.		
Module 10.		
Module 11.		
1.2 LIMS Customization Costs For All Not Covered in 1.0 & 1.1 Above		
1.3 Other SOFTWARE		
1.4 Cost per additional user License		
1.5 Other Licensing Options		
2.0 Implementation Services		
2.1 Programmer (Hourly Rate and Estimated # of Hours Proposed Based on Our Requirements) if not included in Section 1.2 above.		

2.2 Systems Analyst (Hourly Rate and Estimated # of Hours Proposed Based on Our Requirements) if not included in Section 1.2 above	
2.3. Project Manager (Hourly Rate and Estimated # of Hours Proposed Based on Our Requirements) if not included in Section 1.2 above	
2.4 Instrument Interfaces (ref App II)	
• HP 5890 GC (two performing different analyses)	
• HP 5890 GC/MS with ChemStation	
• HP 6890	
• Agilent 6890N	
• Agilent 6890N with ChemStation	
• ABI CE (x5)	
• ABI RT-PCR	
• HP 8453 UV/Vis Spectrometer	
• APEX SEM-EDS	
• Nicolet Avatar 360 FT-IR	
• Various Makes and Models Balances	
2.5 Cost per Instrument for Additional Interfaces	
2.6 System Integration	
2.6.1 Remote Laboratory Sites	
2.6.2 Internet and Intranet Web Servers	
2.6.3 Accounts Receivable	
2.7 Report Development (15 Reports)	
2.7.1 Cost for Each Additional Report	
3.0 Training	
3.1 Functional User Training	
3.2 System Administrator Training	
4.0 Documentation	
4.1 User Manual (Functional)	
4.2 User Manual (System Administrator)	
4.3 Source Code (To Be Placed in Escrow)	

5.0 Travel (List individual Trips with # of Proposed Travelers, estimated # of days on-site and total cost per trip) continue on additional sheets if necessary)	
TRIP # 1	
# of Travelers	
# of days on-site	
Brief Description of Work	
TRIP # 2	
# of Travelers	
# of days on-site	
Brief Description of Work	
TRIP # 3	
# of Travelers	
# of days on-site	
Brief Description of Work	
TRIP # 4	
# of Travelers	
# of days on-site	
Brief Description of Work	
TRIP # 5	
# of Travelers	
# of days on-site	
Brief Description of Work	
TRIP # 6	
# of Travelers	
# of days on-site	
Brief Description of Work	
TRIP # 7	
# of Travelers	
# of days on-site	
Brief Description of Work	
TOTAL COSTS	

Total Costs in written form (Alpha) _____

NAME: _____

TITLE: _____

(SIGNATURE)

DATE: _____

COMPANY: _____
(PRINT NAME)

Appendix VII – Insurance Coverage

STATEMENT CERTIFYING INSURANCE COVERAGE AND INDEMNIFICATION AND HOLD HARMLESS

The Undersigned hereby certifies that he/she has reviewed SBCSD contract requirements contained in Appendix VIII, insurance coverage including Appendix VIII, Section I.B) and background requirements described in the RFP, and that the said insurance coverage will be obtained and be in force upon execution of a contract with SBCSD. The Undersigned further certifies that the specific Certificate of Insurance will be completed and submitted to SBCSD with the signed contract. The Undersigned acknowledges that execution of the contract by SBCSD is contingent, in part, upon receipt by SBCSD of a Certificate of Insurance satisfying the conditions described herein and otherwise satisfactory to SBCSD.

Firm: _____

By: _____
Name

Title: _____

Date: _____

Appendix VIII – SBC Contract Requirements

The following paragraphs are required in all contracts with San Bernardino County. Many of these paragraphs are cited specifically in the main part of the RFP however all are required.

A. General

1. Representation of the County

In the performance of the Agreement, VENDOR, its agents and employees, shall act in an independent capacity and not as officers, employees, or agents of the County of San Bernardino.

2. Vendor Primary Contact

The VENDOR will designate an individual to serve as the primary point of contact for the Agreement. VENDOR or designee must respond to COUNTY inquiries regarding the contract (excluding responses discussed in Section I, F above) within two (2) business days. VENDOR shall not change the primary contact without written acknowledgement to the COUNTY.

3. Change of Address

VENDOR shall notify the COUNTY in writing, of any change in mailing address within ten (10) business days of the change.

4. Subcontracting

VENDOR agrees not to enter into any subcontracting agreements for work contemplated under the Agreement without first obtaining written approval from the COUNTY. Any subcontracting shall be subject to the same terms and conditions as VENDOR. VENDOR shall be fully responsible for the performance and payments of any subcontractor's contract.

5. Agreement Assignability

Without the prior written consent of the COUNTY, the agreement is not assignable by VENDOR either in whole or in part.

6. Agreement Amendments

VENDOR agrees any alterations, variations, modifications, or waivers of the provisions of the Agreement, shall be valid only when reduced to writing, executed and attached to the original Agreement and approved by the required persons.

7. Termination for Convenience

The COUNTY for its convenience may terminate in whole or in part upon sixty (60) calendar day's written notice this Agreement. If such termination is effected, an equitable adjustment in the price provided for in this Agreement shall be made. Such adjustment shall provide for payment to the VENDOR for services rendered and expenses incurred prior to the effective date of termination. Upon receipt of termination notice VENDOR shall promptly discontinue services unless the notice directs otherwise. VENDOR shall deliver promptly to COUNTY and transfer title (if necessary) all completed work, and work in progress, including drafts, documents, plans, forms, data, products, graphics, computer programs and reports.

8. Attorney Fees and Costs

If any legal action is instituted to enforce any party's rights hereunder, each party shall bear its own costs and attorneys' fees, regardless of who is the prevailing party. This paragraph shall not apply to those costs and attorneys' fees directly arising from a third-party legal action against a party hereto and payable under Section VI, B-1 - INDEMNIFICATION.

9. Venue and Choice of Law

This RFP and any contract issued pursuant thereto shall be governed by the laws of the State of California. The venue of any action or claim brought by any party to this Agreement will be the Superior Court of California for the County of San Bernardino, Central District. Each party hereby waives any law or rule of the court, which would allow them to request or demand a change of venue. If any action or claim concerning this Agreement is brought by any third-party and filed in another venue, the parties hereto agree to use their best efforts to obtain a change of venue to San Bernardino County.

10. Licenses and Permits

VENDOR shall ensure that it has all necessary licenses and permits required by the laws of Federal, State, COUNTY, and municipal laws, ordinances, rules and regulations. The VENDOR shall maintain these licenses and permits in effect for the duration of this Agreement. VENDOR will notify COUNTY immediately of loss or suspension of any such licenses and permits. Failure to maintain a required license or permit may result in immediate termination of this Agreement.

11. Notification Regarding Performance

In the event of a problem or potential problem that could impact the quality or quantity of work, services, or the level of performance under this Agreement, the VENDOR shall notify the COUNTY within one- (1) working day, in writing and by telephone.

12. Conflict of Interest

VENDOR shall make all reasonable efforts to ensure that no COUNTY officer or employee, whose position in the COUNTY enables him/her to influence any award of this contract or any competing offer, shall have any direct or indirect financial interest resulting from the award of this contract or shall have any relationship to the VENDOR or officer or employee of the VENDOR.

13. Improper Consideration

VENDOR shall not offer (either directly or through an intermediary) any improper consideration such as, but not limited to, cash, discounts, service, the provision of travel or entertainment, or any items of value to any officer, employee or agent of the COUNTY in an attempt to secure favorable treatment regarding this Agreement.

The COUNTY, by written notice, may immediately terminate any Agreement if it determines that any improper consideration as described in the preceding paragraph was offered to any officer, employee or agent of the COUNTY with respect to the proposal and award process. This prohibition shall apply to any amendment, extension or evaluation process once an Agreement has been awarded.

VENDOR shall immediately report any attempt by a COUNTY officer, employee or agent to solicit (either directly or through an intermediary) improper consideration from VENDOR. The report shall be made to the supervisor or manager charged with supervision of the employee or to the County Administrative Office. In the event of a termination under this provision, the COUNTY is entitled to pursue any available legal remedies.

14. Inaccuracies or Misrepresentations

If in the course of the RFP process or in the administration of a resulting Agreement, the COUNTY determines that VENDOR has made a material misstatement or misrepresentation or that materially inaccurate information has been provided to the COUNTY, the VENDOR may be terminated from the RFP process or in the event a Agreement has been awarded, the Agreement may be immediately terminated.

In the event of a termination under this provision, the COUNTY is entitled to pursue any available legal remedies.

15. Employment of Former County Officials

Provide information on former County of San Bernardino administrative officials (as defined below) who are employed by or represent your business. The information provided must include a list of former county administrative officials who terminated county employment within the last five years and who are now officers, principals, partners, associates or members of the business. Should also include the employment and/or representative capacity and the dates these individuals began employment with or representation of your business. For purposes of this section, "county administrative official" is defined as a member of the Board of Supervisors or such officer's staff, County Administrative Officer or member of such officer's staff, county department or group head, assistant department or group head, or any employee in the Exempt Group, Management Unit or Safety Management Unit.

Failure to provide this information may result in the response to the request for proposal being deemed non-responsive.

16. Recycled Paper Products

The COUNTY has adopted a recycled product purchasing standards policy (11-10), which requires contractors to use recycled paper for proposals and for any printed or photocopied material created as a result of a contract with the COUNTY. The policy also requires Contractors to use both sides of paper sheets for reports submitted to the COUNTY whenever practicable

17. Invoices

VENDOR shall provide COUNTY itemized monthly invoices, in arrears, for services performed under this Agreement within twenty (20) days of the end of the previous month.

18. Ownership of Documents

All documents, data, products, graphics, computer programs and reports prepared by VENDOR pursuant to this Agreement shall be considered property of the COUNTY upon payment for services. All such items shall be delivered to COUNTY at the completion of work under this Agreement, subject to the requirements of Section VI, A-7 (Termination for Convenience). Unless otherwise directed by COUNTY, VENDOR may retain copies of such items.

19. Release of Information.

No news releases, advertisements, public announcements or photographs arising out of this Agreement or VENDOR's relationship with COUNTY may be made or used without prior written approval of the COUNTY, except where required by law.

20. Notice Regarding Public Disclosure of Contents of Proposal

All responses to this Request for Proposal shall become the exclusive property of the COUNTY. At such time as COUNTY recommends any VENDOR to the Board of Supervisors, and that such recommendation, together with any recommended contract, appears on the Board Agenda, all proposals for such contract shall become a matter of public record and shall be regarded as public records, with the exception of those elements of each proposal which are defined by the VENDOR as business or trade secrets and are plainly and prominently marked as "TRADE SECRET," "CONFIDENTIAL" or "PROPRIETARY."

Each element of a proposal which a VENDOR desires not be considered a public record must be clearly marked as set forth above, **readily separable** from the other portions of the response, and any blanket statement (i.e., regarding entire pages, documents, or other non-specific designations) by a VENDOR shall not be sufficient and shall not bind the COUNTY in any way whatsoever. The COUNTY shall not in any way be liable or responsible for the disclosure of any such records, or parts thereof, if disclosure is required or permitted under the California Public Records Act or otherwise by law.

21. Disclosure of Criminal and Civil Proceedings

The COUNTY reserves the right to request the information described herein from the VENDOR selected for contract award. Failure to provide the information may result in a disqualification from the selection process and no award of contract to the VENDOR. The COUNTY also reserves the right to obtain the requested information by way of a background check performed by the San Bernardino County Sheriff's Department or an investigative firm. The selected VENDOR also may be requested to provide information to clarify initial responses. Negative information provided or discovered may result in disqualification from the selection process and no award of contract.

The selected VENDOR may be asked to disclose whether the firm, or any of its partners, principals, members, associates or key employees (as that term is defined herein), within the last ten (10) years, has been indicted on or had charges brought against it or them (if still pending) or convicted of any crime or offense arising directly or indirectly from the conduct of the firm's business, or whether the firm, or any of its partners, principals, members, associates or key employees, has within the last ten years, been indicted on or had charges brought against it or them (if still pending) or convicted of any crime or offense involving financial misconduct or fraud. If the response is affirmative, the VENDOR will be asked to describe any such indictments or charges (and the status thereof), convictions and the surrounding circumstances in detail.

In addition, the selected VENDOR may be asked to disclose whether the firm, or any of its partners, principals, members, associates or key employees, within the last ten (10) years, has been the subject of legal proceedings as defined herein arising directly from the provision of services by the firm or those individuals. "Legal proceedings" means any civil actions filed in a court of competent jurisdiction, or any matters filed by an administrative or regulatory body with jurisdiction over the firm or the individuals. If the response is affirmative, the VENDOR will be asked to describe any such legal proceedings (and the status and disposition thereof) and the surrounding circumstances in detail.

For purposes of this provision "key employees" includes any individuals providing direct service to the COUNTY. "Key employees" do not include clerical personnel providing service at the firm's offices or locations.

22. Background Checks

Sheriff's Department will perform background checks on VENDOR's employees as a condition of granting them access to the COUNTY's detention facilities. Sheriff shall have the sole discretion to determine security acceptability of all VENDOR's personnel at any time during the contract period. Personnel found to be unacceptable security risks will be denied access to the facilities. All VENDOR's employees will be required to wear identification badges while on COUNTY's detention facility property.

23. Local Preference

The County of San Bernardino has adopted a preference for vendors whose principal place of business is located within the boundaries of the County. A five percent (5%) preference may be applied prior to approval of any purchase or acquisition of services, equipment, goods or supplies.

For purposes of the application of the local preference policy (County Policy 11-12), "principal place of business" is defined as the vendor's main office (or headquarters) or a major regional office. A "major regional office" is defined as a business location apart from the vendor's main office (or headquarters) which:

- Has been issued a business license, if required, and has been established and open for a minimum of six months prior to the date that

the approval authority authorizes the circulation of an RFP/RFQ/Quote for any contract, agreement, or purchase order to which it responds; and

- Can demonstrate on-going business activity in the field of endeavor on which the VENDOR is proposing, from that office during the preceding six months; and
- Has a minimum of twenty-five percent (25%) of the vendor's full time management employees and twenty-five percent (25%) of its full time regular employees working from the San Bernardino County location(s).

The COUNTY's Local Preference Policy means for example, if two Vendors are responding to this RFP and if quality, service and ability to meet the COUNTY's needs are equal, County staff must determine if one of the Vendors is a local vendor. If one of the Vendors is a local vendor, and its quoted price or cost for services, equipment, goods or supplies does not exceed five percent (5%) of the other vendor's quoted price or cost, unless it is determined that an exemption applies, staff should recommend the local vendor for the contract award.

24. Electronic Fund Transfer Program

The County of San Bernardino Auditor/Controller-Recorder office prefers direct deposit for vendor payments. Instead of creating a paper check the COUNTY will, with the VENDOR's approval, directly deposit funds to the VENDOR's checking account via electronic funds transfer (EFT). Details and forms regarding EFT payments will be provided upon award.

25. Legality and Severability

The parties' actions under the Agreement shall comply with all applicable laws, rules, regulations, court orders and governmental agency orders. If a provision of the Agreement is terminated or held to be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall remain in full effect.

26. Taxes

COUNTY is exempt from Federal excise taxes and no payment shall be made for any personal property taxes levied on VENDOR or on any taxes levied on employee wages. The COUNTY shall only pay for any State or local sales or use taxes on the services rendered or equipment and/or parts supplied to the COUNTY pursuant to the Agreement.

B. Indemnification and Insurance Requirements (SP11-07 for Professional)

1. Indemnification

The VENDOR agrees to indemnify, defend and hold harmless the COUNTY and its authorized officers, employees, agents and volunteers from any and all claims, actions, losses, damages and/or liability arising out of this contract or VENDOR's acts, errors or omissions and for any costs or expenses incurred by the COUNTY on account of any claim therefore, except where such indemnification is prohibited by law.

2. Insurance Coverage

Without in any way affecting the indemnity herein provided and in addition thereto, the VENDOR shall secure and maintain throughout the Agreement the following types of insurance with limits as shown:

- a) Workers' Compensation - A program of Workers' Compensation insurance or a State-approved Self-Insurance Program in an amount and form to meet all applicable requirements of the Labor Code of the State of California, including Employer's Liability with \$250,000 limits, covering all persons providing services on behalf of the VENDOR and all risks to such persons under this Agreement.
 - (1) If VENDOR has no employees, it may certify or warrant to COUNTY that it does not currently have any employees or individuals who are defined as "employees" under the Labor Code and the requirements for Workers' Compensation coverage will be waived by the County's Risk Manager.
 - (2) With respect to VENDORS that are non-profit corporations organized under California or Federal law, volunteers for such entities are required to be covered by Workers' Compensation insurance. If the County's Risk Manager determines that there is no reasonably priced coverage for volunteers, evidence of participation in a volunteer insurance program may be substituted.
- b) Comprehensive General and Automobile Liability Insurance - This coverage to include contractual coverage and automobile liability coverage for owned, hired and non-owned vehicles. The policy shall have combined single limits for bodily injury and property damage of not less than one million dollars (\$1,000,000).
- c) Errors and Omission Liability Insurance - Combined single limits of \$1,000,000 for bodily injury and property damage and \$3,000,000 in the aggregate or
- d) Professional Liability - Professional liability insurance with limits of at least \$1,000,000 per claim or occurrence.

3. Additional Named Insured

All policies, except for the Workers' Compensation, Errors and Omissions and Professional Liability policies shall contain additional endorsements naming the COUNTY and its officers, employees, agents and volunteers as additional named insured with respect to liabilities arising out of the performance of services hereunder.

4. Waiver of Subrogation Rights

Except for Errors and Omissions Liability and Professional Liability, VENDOR shall require the carriers of the above-required coverage's to waive all rights of subrogation against the COUNTY, its officers, employees, agents, volunteers, contractors, and subcontractor.

5. Policies Primary and Non-Contributory

All policies required above are to be primary and non-contributory with any insurance or self-insurance programs carried or administered by the COUNTY.

6. Proof of Coverage

The VENDOR shall immediately furnish certificates of insurance to the COUNTY Department administering the Agreement evidencing the insurance coverage, including the endorsements above required, prior to the commencement of performance of services hereunder, which certificates shall provide that such insurance shall not be terminated or expire without thirty (30) days written notice to the Department. VENDOR shall maintain such insurance from the time VENDOR commences performance of services hereunder until the completion of such services. Within sixty- (60) days of the commencement of this Agreement, the VENDOR shall furnish certified copies of the policies and all endorsements.

7. Insurance Review

The above insurance requirements are subject to periodic review by the COUNTY. The County's Risk Manager is authorized, but not required, to reduce or waive any of the above insurance requirements whenever the Risk Manager determines that any of the above insurance is not available, is unreasonably priced, or is not needed to protect the interests of the COUNTY. In addition, if the Risk Manager determines that heretofore, unreasonably priced or unavailable types of insurance coverage or coverage limits become reasonably priced or available, the Risk Manager is authorized but not required, to change the above insurance requirements, to require additional types of insurance coverage or higher coverage limits, provided that any such change is reasonable in light of past claims against the COUNTY, inflation, or any other item reasonably related to the COUNTY's risk.

Any such reduction or waiver for the entire term of the Agreement and any change requiring additional types of insurance coverage or higher coverage limits must be made by amendment to this Agreement. VENDOR agrees to execute any such amendment within thirty (30) days of receipt.

C. Right to Monitor and Audit

1. Right to Monitor

The COUNTY, shall have absolute right to review and audit all records, books, papers, documents, corporate minutes, and other pertinent items as requested, and shall have absolute right to monitor the performance of VENDOR in the delivery of services provided under this Agreement. VENDOR shall give full cooperation, in any auditing or monitoring conducted. VENDOR shall cooperate with the COUNTY in the implementation, monitoring and evaluation of this agreement and comply with any and all reporting requirements established by the COUNTY.

In the event the COUNTY determines that VENDOR'S performance of its duties or other terms of this Agreement are deficient in any manner, COUNTY will notify VENDOR of such deficiency in writing or orally, provided written confirmation is given five (5) days thereafter. VENDOR shall remedy any deficiency within forty-eight (48) hours of such notification, or COUNTY at its option, may terminate this Agreement immediately upon written notice, or remedy deficiency and off set the cost thereof from any amounts due the VENDOR under this Agreement or otherwise.

2. Availability of Records

All records pertaining to services delivered and all fiscal, statistical and management books and records shall be available for examination and audit by COUNTY representatives for a period of three years after final payment under the Agreement or until all pending COUNTY, State and Federal audits are completed, whichever is later.